Saskatchewan
Agriculture
Development
Fund

ADF

Agriculture Development Fund

Progress Report 1987-1988

89-06144/

Agriculture Development Fund Progress Report 1987-88

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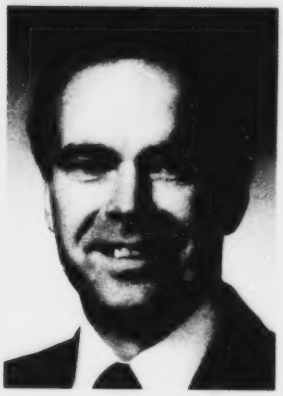
Minister's Message



As Minister of Agriculture, I am pleased to present the Agriculture Development Fund's (ADF) third progress report.

In 1985, when the Government of Saskatchewan announced the ADF, it made a commitment to the future of agriculture in Saskatchewan. And that commitment has produced great dividends in the last three years.

The ADF has supported a multitude of research and development projects at the University of Saskatchewan, University of Regina, and with private industry and individuals throughout the province.

Working in conjunction with agribusiness, the ADF has undertaken some of the most challenging aspects of farming today, including soil conservation, specialty crop production, livestock production and nutrition and farm business management.

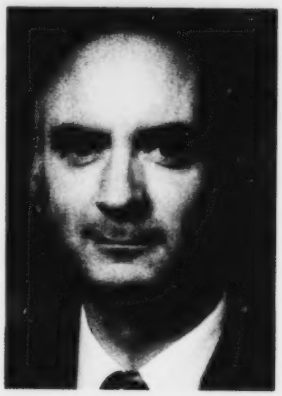
Results from the research and development projects are then put to the ultimate test on Saskatchewan farms through the ADF's on-farm demonstration program. On-farm demonstrations test new technologies plus provide a forum to display and accurately evaluate the ideas of innovative farmers.

A prime example of this government's commitment to agriculture in Saskatchewan is its contribution to the construction of the Agricultural College within the Agriculture Science Complex at the University of Saskatchewan in Saskatoon. Your government pledged $19 million to the project through the ADF, in addition to contributions from other government departments.

Our commitment is to work with farmers for farmers. The strength of Saskatchewan's economy is dependent on agriculture. And the ADF, through its support of research, development and demonstration projects, is playing a major role in keeping agriculture competitive.

Hon. Grant Devine, Premier,
Minister of Agriculture

Manager's Message



In 1987-88, the ADF funded about 200 research and development projects, and about 150 demonstration projects. It also continued its financial support to the Saskatchewan Water Corporation, the Saskatchewan Irrigation Development Centre (SIDC), the POS (Protein, Oil and Starch) Pilot Plant, and the Veterinary Infectious Disease Organization (VIDO). Recognizing the importance of agricultural research, the ADF and the University of Saskatchewan signed a $7.5 million strategic funding agreement to support fundamental research in various disciplines of agriculture.

Project results are beginning to accumulate. Therefore, efforts in the past year have been concentrated on communicating these results to the people who can benefit from them - Saskatchewan farmers.

To do this, the ADF expanded the on-farm demonstration portion of the program by contracting an on-farm demonstration coordinator and regional program consultants.

Plans were also initiated to increase the circulation of the monthly newsletter - ADFNews, and to distribute a list of ongoing demonstration projects to all Saskatchewan farmers annually.

A computer database was established and now ADF project information and results are at the fingertips of those with personal computers. The information is also available at ag rep offices throughout the province.

During the two years remaining in its mandate, the ADF will continue to support research, development and demonstration efforts designed to keep Saskatchewan farmers competitive on global markets.

With government, industry and producers working together, we will create a strong future for agriculture in the province.

John Taylor,
ADF Manager

Introduction

The Agriculture Development Fund (ADF) was initiated by the Government of Saskatchewan in the spring of 1985 to support agricultural research, development and demonstration projects.

The five-year, $200 million program funds activities in areas such as crops and forages, soils, livestock, land improvement, engineering, marketing, new product development and agricultural processing.

Applications, available through Saskatchewan Agriculture, are processed four times a year: January 1, April 1, July 1 and October 1. Any individual or organization with an idea that will benefit agriculture in Saskatchewan is eligible to apply.

Applications are reviewed by four major technical committees: crops, soils, livestock and human resources. Committee membership is listed at the end of this report.

In the case of research and development applications, a committee composed of Saskatchewan Agriculture senior management staff approves projects and awards funding. Decisions are based on the recommendations and priority ratings awarded by the technical committees.

The committee charged with approving demonstration project applications is composed of Saskatchewan Rural Development's Director of Extension, regional directors, three farmer representatives from Regional Extension Councils and the manager of ADF. Their decisions are also based on the technical reviews.

Applicants with approved projects are then invited to enter into a contract with Saskatchewan Agriculture - Agriculture Development Fund (ADF).

In addition to the direct provincial contribution, the ADF also administers funding from the federal-provincial Economic and Regional Development Agreement (ERDA), a sub-agreement on agriculture.

This report provides a brief summary of all publicly funded agricultural research, development and demonstration activities in Saskatchewan during 1987-88. For ease of reference, they have been divided into five major areas: crops, soils, livestock, human resources and engineering.

Research

Staying in touch with the challenges facing Saskatchewan farmers today and anticipating those of the future are the keys to remaining competitive in the agricultural marketplace. By supporting research, the Agriculture Development Fund (ADF) is helping to secure the future of farming in Saskatchewan.

During 1987-88, the ADF supported about 200 individual research projects. In addition, the ADF and the University of Saskatchewan signed a $7.5 million strategic funding agreement. Under the strategic funding agreement, the ADF provides money to various disciplines of agriculture to support basic research. It is this basic research that is the foundation for future developments. Strategic funding develops principles such as genetic engineering. These principles are then implemented in specific research projects to improve varieties, vaccines or production techniques.

Many of the research projects supported by the ADF are joint efforts between producer groups, agribusiness and government.

Soils and crops

The majority of Saskatchewan's crop research is conducted at the Crop Development Centre of the University of Saskatchewan. The ADF, in cooperation with producer groups, supports the development of superior cereal, oilseed and special crop varieties as well as the improvement of production management techniques.

Investigations into production efficiency, the use of fertilizers, herbicides, pesticides, and biological controls are also supported by the ADF. Development of the horticulture industry and new northern agricultural options such as wild rice production have been investigated.

Soil fertility, water use efficiency, erosion control, management of organic soils, minimum tillage practices and the use of forages and legumes as soil reclamation tools are some of the ideas being explored in soil research.

Livestock

Recognizing that food and shelter are basic requirements for most livestock in Saskatchewan, the ADF is supporting a variety of research projects aimed at improving the quality of livestock produced in the province, by improving feed products and habitat.

The ADF, in cooperation with producer groups, is also funding the development of methods to enhance breed quality, reproduction efficiency and production capability in locally-raised livestock.

Biotechnology

Continued research and development opens the doors to areas such as biotechnology. The ADF is supporting projects in which biotechnological techniques are used to identify and develop microorganisms which could serve as effective pest control agents; to develop vaccines to combat common diseases in cattle and swine; to promote animal growth and production and to develop new and improved crop varieties.

Diversification

The ADF is also supporting ideas that diversify the province's agricultural economy. For example, funding was provided to investigate methods of improving Saskatoon berry production and to explore the development of a straw particle board industry. In addition, the wild berry industry is beginning to blossom in the north.

The future

The ADF recognizes research as the backbone to the success of the agricultural economy and therefore will continue to cooperate with producer groups and industry in supporting the efforts of scientists and technicians throughout the province.

Development

To remain competitive, an industry must not only be prepared for change, but recognize opportunities for development. The Agriculture Development Fund (ADF) believes in the power of ideas. It supports the use of scientific knowledge to develop products, processes and services that will benefit agriculture in Saskatchewan.

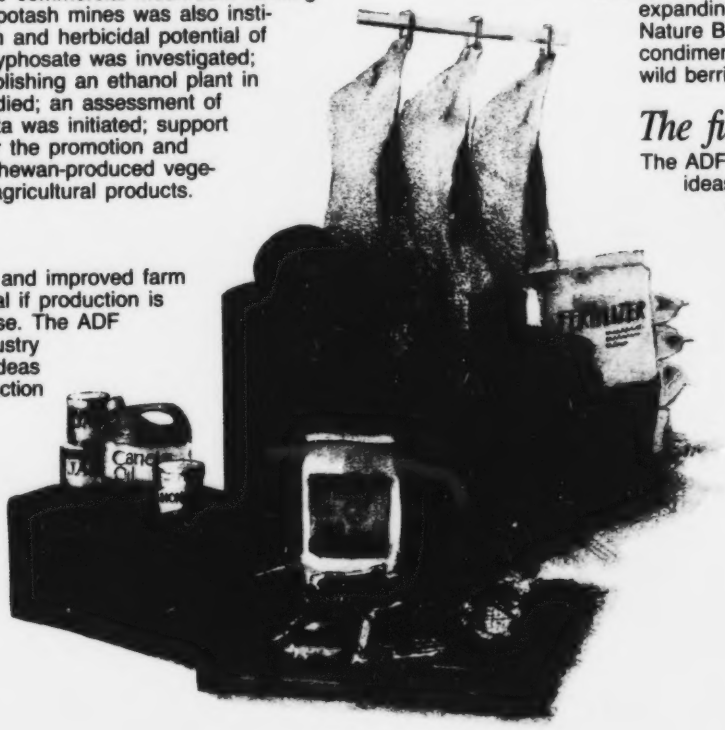
The ADF recognizes that combining innovation and initiative is the key to improving today's agricultural economy and diversifying Saskatchewan's future opportunities.

In the past year, the ADF provided funding for a variety of development projects throughout the province.

Soils and crops

With funding provided by the ADF, new varieties were tested for production feasibility, marketing and promotion for new products was stimulated, the development of new commercial operations was evaluated and new production ideas were studied.

For example: studies were initiated to determine the feasibility of using flaxseed oil as a concrete preservative and using canola oil as a dust suppressant; an evaluation of dryland Pinto Bean production was started; hybrid varieties of corn were tested for their production suitability; an economic, market and technical feasibility study for a large-scale commercial mushroom farming operation in inactive potash mines was also instigated; the desiccation and herbicidal potential of preharvest applied glyphosate was investigated; the feasibility of establishing an ethanol plant in the province was studied; an assessment of fertilizer response data was initiated; support was also provided for the promotion and marketing of Saskatchewan-produced vegetables and northern agricultural products.



Development of new and improved farm equipment is essential if production is to continue to increase. The ADF actively supports industry and producers with ideas that can improve production efficiency. Development of a hay densifier for marketing long-fibre Saskatchewan alfalfa was initiated. A universal "stripper" snow trap attachment was tested. Development of a portable wheat moisture tester was supported. Improvements for electrical heating systems in livestock facilities were investigated; and equipment to support the development of compressed natural gas (CNG) as an alternative farm fuel was developed.

Diversification

The marketability of specialty crops such as Jerusalem artichokes was investigated. Marketing of northern products such as cage-reared rainbow trout, wild rice and wild berries was supported. The feasibility of alstromeria (cut flower) production was evaluated. In addition, the feasibility of establishing an ethanol plant in Saskatchewan was studied.

Northern agriculture

Northern Saskatchewan is rich with opportunities and through funding provided by the ADF, northern residents are beginning to tap the opportunities and explore avenues for development. The production of wild and cultivated blueberries and ligonberries (often referred to as low-bush cranberries) is being investigated. Northerners have begun cage-rearing rainbow trout. Markets for Saskatchewan-produced wild rice are expanding, and industries such as Nature Berry, which produces meat condiments made from Saskatchewan's wild berries, are expanding.

The future

The ADF will continue to support ideas generated by the agricultural industry, thereby playing a major role in keeping Saskatchewan farmers competitive at home and abroad.

Demonstration

Research theories can be tested many times in controlled conditions, but unless they stand up to practical application they are of no benefit to the end user - farmers. Therefore, the Agriculture Development Fund (ADF) includes an on-farm demonstration program. This portion of the ADF helps introduce new technologies to the farm.

ADF on-farm demonstrations provide farmers with an opportunity to view or have hands-on experience with new agricultural technology.

Bringing new technology to the local level serves two purposes: it provides researchers with an opportunity to evaluate results obtained in actual situations; and most importantly, it allows producers to evaluate the benefits of a new variety, new practice or new technology in their area.

Since many demonstrations are joint efforts, producer groups, agribusiness, and individuals with an idea that will benefit Saskatchewan agriculture are invited to apply for an ADF demonstration project.

A comprehensive study of past on-farm demonstration programs was conducted during the past year, and the current ADF demonstration program reflects the changes that report suggested. For example, on-farm demonstrations now include the testing of new technologies developed outside of Saskatchewan as well as those developed at home. Project managers work with ADF consultants and local ag reps to ensure that the information received from the demonstrations is made public, so that farmers can learn from each other. ADF on-farm demonstrations are also now more concerned with determining the economics of technologies. Projects, therefore, have to be well-organized and monitored closely.

Soils and crops

Variety trials, production techniques, fertilizer use and soil conservation methods are being explored throughout the province.

Intensive cereal management systems, new farming techniques, weed control methods, and various crop rotation practices are being demonstrated.

New soil conservation equipment, extended cropping and the incorporation of specialty crops into conventional rotations were also displayed.

Demonstrations can be initiated by individuals working with their local ag rep. In many areas, however, producers are organizing crop clubs or joining forces with producer associations to conduct larger demonstrations. For example, in east central Saskatchewan, the Kelvington Agricultural Society, in conjunction with its local ag rep, initiated a project entitled Maximum Economic Yield, in which cooperators are evaluating cost-effective methods of applying fertilizer and the benefits of intercropping peas and canola.

Livestock and forages

Pasture management, livestock production techniques and feed ration balancing, were demonstrated at farms throughout Saskatchewan during the past year. In addition, the use of corn, sorghum and kochia as feed sources was explored.

Rotational grazing systems were evaluated and methods of brush control were demonstrated.

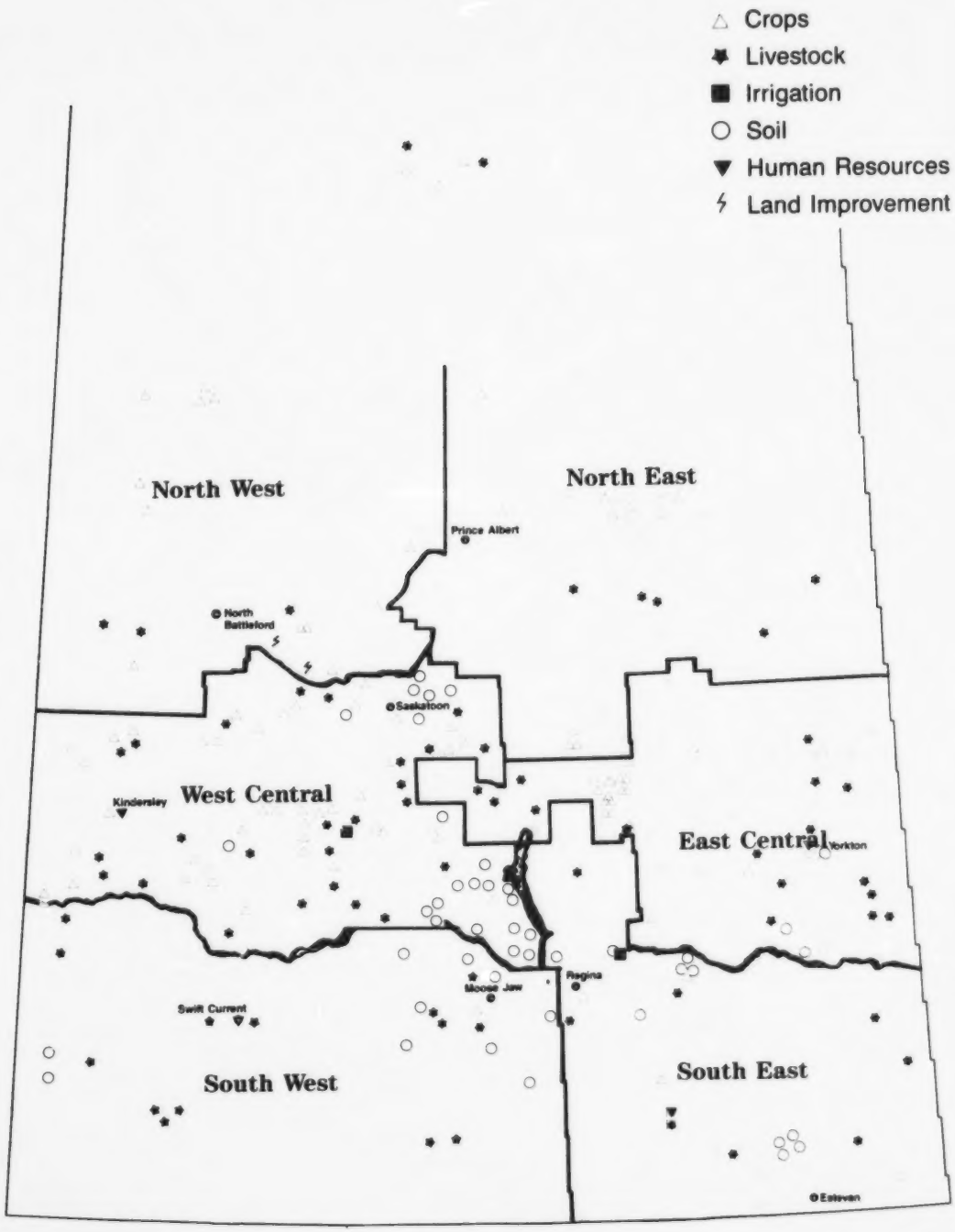
The success of a feedlot demonstration at Baldwinton in northwestern Saskatchewan has resulted in the coordination of efforts to evaulate new feedlot technologies province-wide.

The future

The ADF has supported more than 500 demonstration projects since its inception. Consultants are now located in the northern, central and southern regions of the province providing an expansion of efforts in bringing new technologies to Saskatchewan farms.

On-farm demonstrations supported by the ADF during 1987-88 are identified on the map opposite.

Locations of Demonstration Projects In Saskatchewan



Economic and Regional Development Agreement (ERDA)

Since 1984, Agriculture Canada and Saskatchewan's Agriculture Development Fund (ADF) have funded and administered over 200 research and development projects through a joint commitment to the Subsidiary Agreement on Agriculture Development under the Canada/Saskatchewan Economic and Regional Development Agreement (ERDA).

The five-year sub-agreement is a major initiative to foster practical research, demonstration and educational projects designed to improve the profitability and future viability of Saskatchewan's most important industry - agriculture.

Research and development are essential for increasing productivity and guaranteeing the competitiveness of Saskatchewan's agricultural sector into the future.

Projects funded through ERDA help to improve the productivity and profitability of crop and livestock production; conserve, enhance and reclaim our soil and water resources; and help farm families meet today's increasingly complex technical, financial and personal demands.

in addition, there has been a major effort to develop new and expanded markets for Saskatchewan products and to develop irrigation systems and soil conservation practices.

Livestock

One example of a province-wide demonstration project is the New Pasture and Grazing Technologies Project. The project conducts research and demonstrates effective grazing methods at various locations throughout the province. It is conducted by four regional rangeland coordinators and involves about 40 producers.

Soils and crops

In accordance with the National Agricultural Strategy, $500,000 was committed to a pilot project designed to promote soil and crop management practices that will maintain soil quality. The Save Our Soils program provides funding to district extension boards to conduct demonstrations of control methods for wind and water erosion, soil salinity and declining organic matter levels as well as educational tours and meetings which promote soil conservation.

Farm management

The Farming to Win program, a goal-oriented approach to farm management initiated in 1986, has become extremely important among Saskatchewan farmers. The program now offers courses to farm families or management teams on marketing as well as management.

The future

Final reports from many individual projects will become available in the next year as this agreement comes to an end. Recognizing the important role ERDA has played in supporting agricultural research and development, continued cooperation between the two levels of government is envisioned.

Other Funding Sources

Cattle Marketing Deductions Fund

The Cattle Marketing Deductions Fund (CMDF), administered through the livestock branch of Saskatchewan Agriculture, promotes beef and beef products in the province.

Funds are accumulated through a $1.00 check-off or levy for each animal offered for sale in Saskatchewan.

In 1987-88 the Cattle Marketing Deductions Fund collected about $939,000. The cattle check-off is a voluntary deduction and producers may obtain a refund by providing proof of livestock sales.

Horned Cattle Fund

The Horned Cattle Fund (HCF), administered through the livestock branch of Saskatchewan Agriculture, promotes research and development in the livestock industry. Funds are collected by deducting $2.00 for each animal with horns that is offered for sale in the province.

In 1987-88 the Horned Cattle Fund collected about $191,000. The Fund also continued to support research into beef herd management and pasture and forage use on its beef herd in Melfort. Expenses incurred by the research project are paid from the sale of finished cattle.

ADF Research and Development Projects

Title/Objective/Project Number	Project Manager/ Contractor/Institution	Funding Agency/ Project Length	Funding 1987-88
CROPS			
Selection and Evaluation of Improved High Yielding Spring Wheat with Soft White and Triple M Qualities • support for breeding work 1.1-11	L. Song Saskatchewan Wheat Pool	ERDA(P) three years	$ 68,000
Winter Wheat Production Technology • detailed study of all aspects of winter wheat production that will lead to production recommendations suitable for Saskatchewan conditions 1.1-1	D.B. Fowler University of Saskatchewan	ERDA(F) five years	860,400
Winter Wheat Production in Saskatchewan • assess the current status of winter wheat as a production alternative to Saskatchewan grain producers	Western Canadian Wheat Growers Association	Saskatchewan Agriculture multiple years	10,000
The Effect of Growth Regulators on Winter Survival, Lodging and Yield of Norstar Winter Wheat and Musketeer Fall Rye • determine effect of growth regulators on lodging resistance of winter cereals, on yield and on winter survival S-86-05-0067	L.V. Gusta H.M. Austenson University of Saskatchewan	SARF one year	7,500
Durum Wheat Production in Saskatchewan • identify industrial or manufacturing market opportunities for durum wheat or its by-products	Western Canadian Wheat Growers Association	Saskatchewan Agriculture multiple years	10,000

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CMDF - Cattle Marketing Deductions Fund
SARF - Saskatchewan Agricultural Research Fund

Title/Objective/Project Number	Project Manager/ Contractor/Institution	Funding Agency/ Project Length	Funding 1987-88
Screening of Durum Wheat and Wild Emmer Wheat Germplasm for Drought Tolerance • evaluate germplasm lines of durum wheat and its immediate progenitor, wild emmer wheat S-86-05-0039	S. Jana University of Saskatchewan	SARF one year	14,400
Semi-Dwarf Wheat • develop appropriate crop production practices for growing semi-dwarf wheat under Saskatchewan conditions 1.1-3	J. Clarke Agriculture Canada Research Station Swift Current	ERDA(F) four years	324,600
Fine Grinding and Air Classification of Clears from HRS Flour Milling into Wheat Protein Concentrate and Bakers Flour • develop procedures for fine grinding coarse flours into protein, starch and cell wall components and separating a high protein concentrate for use as a gluten substitute R-86-07-0026	F.W. Sosulski University of Saskatchewan	ADF three years	34,440
Development of Techniques and Strategies of Selection for Grain Yield, Protein Content, and Kernel Hardness in Wheat Using Near-Infrared Spectroscopy • develop and evaluate calibration constants for a near-infrared reflectance spectrophometer suitable for measuring protein content and kernel hardness in wheat and implement evaluation and selection strategies that increase efficiency in developing improved cultivars S-86-05-0016	T.N. McCaig Agriculture Canada Research Station Swift Current	SARF one year	11,700

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Title/Objective/Project Number	Project Manager/ Contractor/Institution	Funding Agency/ Project Length	Funding 1987-88
Reasons for Vigor and Performance Differences Between Pedigree Seed Lots and Seed Lot Vigor Testing Procedures • identify non-genetic factors affecting seedling vigor and final crop performance differences between different seed lots of barley and wheat to determine why differences occur, make recommendations and evaluate seed lot vigor testing procedures R-86-05-0184	B.G. Rossnagel Saskatchewan Seed Growers Association	ADF two years	13,750
Maximizing Barley Production Under High Input Conditions Via Semi-Dwarf Dwarf Varieties • evaluation of production potential of a new semi-dwarf, strong-strawed barley variety in terms of moisture requirements under irrigation and natural conditions, optimum seed rate for production, and evaluation of straw strength under irrigated conditions for a breeding program R-86-05-0027	B.G. Rossnagel University of Saskatchewan	ADF four years	34,598
Canola Potential in Saskatchewan • demonstrate current and new technology to increase average yields by 25 percent in 1989 1.3-1	E. Bendig Saskatchewan Canola Growers Association	ERDA(P) one year	126,829
Canola Hybrid Breeding • develop higher-yielding canola hybrids suited to production in Saskatchewan and demonstrate benefits of sulfur fertilization on sulfur deficient soils 1.1-2	K. Downey Agriculture Canada Research Station Saskatoon	ERDA(F) four years	198,300
Hybrid Canola Agronomy Research and Extension • encourage and coordinate hybrid agronomic research being done by private companies and public agencies R-86-05-0170	E. Bendig Saskatchewan Canola Growers Association	ADF three years	25,000

Title/Objective/Project Number	Project Manager/ Contractor/Institution	Funding Agency/ Project Length	Funding 1987-88
Integrated Management of Sclerotinia Blackleg Canola - East Central Saskatchewan • economically return canola yields in East Central Saskatchewan to consistently high levels through improved disease management R-86-05-0003	R. Morrall University of Saskatchewan	ADF three years	29,900
Enzymatic Interestification of Canola Oil • develop an enzyme process to interesterify canola oil with a fully hydrogenated oil from palm, sunflower or canola stearine 1.4-8	A.R. McCurdy University of Saskatchewan	ERDA(P) two years	3,700
Canola as a Dust Suppressant • have the grains industry accept canola oil as a dust suppressant V-87-06-0118	W. Cooper Saskatchewan Canola Growers Association	ADF one year	3,100
Evaluate Canola Oil Against White Mineral Oil (Dust Suppressant) • assess the feasibility of using canola dust oil for the suppression of grain dust in elevators R-86-05-0119	E. Bendig Saskatchewan Canola Growers Association	ADF one year	2,500
Natural Herbicides and Growth Inhibitors in Canola and Sweet Clover • examine whether canola and sweet clover can be used in crop rotations to control weeds 1.3-4	E. Coxworth Saskatchewan Research Council	ERDA(P) two years	9,720
Nutritional Evaluation of Low Mucilage Canola Meal • determine the effects of reduced mucilage content of canola meal on chemical and nutritional content of the meal, the digestibility of energy and protein, the growth and utilization of the meal on hogs and the relative economic value of the meal S-85-05-0006	J.M. Bell M.O. Keith University of Saskatchewan	SARF one year	10,000

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Processing and Analysis of Edible Oil Flax • utilizing the POS facilities, crush and assess the oil characteristics of the extracted oil of a brown-seeded edible oil flax genotype for potential use in food processing V-87-08-0099	W. Scowcroft Biotechnica Canada, Inc. Calgary	ADF two years	40,000
Flax Seed Oil as a Concrete Preservative • develop new markets for flax seed oil (linseed) through the printing and distribution of a brochure containing information on how to prevent the scaling of concrete through the use of linseed oil V-87-09-0115	D. Jaques Flax Growers Western Canada	ADF one year	12,000
An Investigation in Flax into the Modification of Inherited Characters Induced by Somoclonal Variation and Plasmid Insertion • evaluate the usefulness of somaclonal variation and plasmid insertion in variety development R-87-05-0283	G.G. Rowland S.C. Baker Flax Council of Canada	ADF three years	10,000
Effects of Stress on the Yield and Quality of Flax • determine how much genetic variability exists in flax plants for tolerance to low temperature, germination, frost chilling, heat and germination R-87-05-0284	L.V. Gusta S.C. Baker Flax Council of Canada	ADF two years	10,000
A Flax bulletin for Western Canada • publish a "Growing Flax in Canada" bulletin useful to the flax grower V-86-05-0053	G. Hanley Flax Growers Western Canada	ADF two years	4,000
Development of Sound Agronomic Practices for Alfalfa Seed Production • develop, evaluate and promote sound integrated agronomic management techniques which will help to maximize alfalfa seed yields and pedigreed seed quality V-86-05-0017	N. Malek Saskatchewan Alfalfa Seed Producers Association	ADF four years	30,000

Title/Objective/Project Number	Project Manager/ Contractor/Institution	Funding Agency/ Project Length	Funding 1987-88
Development Towards More Efficient Operation of an Alfalfa Dehy Processing System • increase the efficiency by which dehydrated alfalfa products are processed, thereby reducing the cost of production V-86-07-0028	D. Pulkinen Saskatchewan Dehydrators Association Tisdale	ADF two years	6,835
Soil Fertility Requirements for Optimum Alfalfa Seed Production • develop sound soil fertility recommendations for optimum alfalfa seed production and quality R-86-05-0187	W. Weighill Saskatchewan Alfalfa Seed Producers Association	ADF three years	17,000
Alfalfa Pellet Durability and Pelleting Efficiency Study • increase the marketability and profitability of dehydrated alfalfa by increasing handling durability and reducing processing costs V-86-07-0029	D. Pulkinen Saskatchewan Dehydrators Association Tisdale	ADF two years	2,800
Bloat-Safe Alfalfa Study • develop a variety of alfalfa that does not cause animals to bloat 1.1-4	R. Howarth Agriculture Canada Research Station Saskatoon	ERDA(F) four years	53,400
Renovation of Pastures by Direct Seeding • find an effective method of introducing alfalfa into native rangeland, and compare seed drills and renovation methods based on direct seeding of cultivated forage crops S-86-05-0014	J. Waddington N. Holt T. Lawrence Agriculture Canada Research Station Swift Current	SARF one year	15,000
Safe Level of Ascochyta for Lentil Seed • determine if practical tolerances for Ascochyta in lentil seed can be established for Western Canada 1.2-7	R. Morrall Saskatchewan Pulse Crop Development Board	ERDA(P) two years	1,625

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Drying and Ventilation of Lentils • arrive at a relationship between airflow rate and pressure drop in bulk drying and ventilation of lentils, determine the optimum airflow rate for natural drying of lentils for prairie conditions and recommend maximum safe temperature for heated air drying of lentils 1.3-12	D. Jaques Saskatchewan Pulse Crop Development Board	ERDA(P) three years	3,000
Factors Affecting Cooking Quality of Saskatchewan Grown Lentil • identify factors responsible for wide variations observed in the cooking quality of lentil grown in Saskatchewan R-86-05-0156	R.S. Bhatty University of Saskatchewan	ADF two years	10,000
Starter Nitrogen and Rhizobial Strain Interaction in Lentil • Under Saskatchewan conditions, determine if and when an economic response to starter nitrogen can be expected for lentil 1.3-11	D. Jaques Saskatchewan Pulse Crop Development Board	ERDA(P) two years	3,000
MCPA Tolerant Lentils • develop a lentil variety resistant to MCPA herbicide 1.2-5	A.E. Slinkard Saskatchewan Pulse Crop Development Board	ERDA(P) three years	5,000
Development of a Red Cotyledon Lentil for Saskatchewan • develop a red cotyledon lentil similar in yield and performance to the yellow cotyledon variety Eston S-86-05-0062	A.E. Slinkard University of Saskatchewan	SARF one year	11,000
Agronomy Study of Saskatchewan Soils • develop appropriate crop production practices that will increase cereal, oilseed and special crop yields 1.1-5	H. Steppuhn Agriculture Canada Research Station Swift Current	ERDA(F) four years	220,000

Title/Objective/Project Number	Project Manager/ Contractor/Institution	Funding Agency/ Project Length	Funding 1987-88
Regional Testing of Grain Varieties for Saskatchewan • obtain data on performance of licensed spring grain varieties under Saskatchewan soil and climatic conditions, obtain similar data on selected experimental lines for possible licensing, develop lists of recommended crop varieties for various cropping zones and grow prelicensing trials for grain crops to contribute to the database for licensing support R-87-05-0227	B. L. Harvey University of Saskatchewan	ADF three years	197,900
Straw Particle Board Manufacturing • conduct necessary research and development and in-depth market research to fully assess the potential of a viable commercial manufacturing operation in Saskatchewan for use of various types of agricultural waste materials in the production of high-quality, lower-cost particle board V-88-08-0082	B. Russell Solutions Management Group Inc. Regina	ADF two years	40,000
Literature Search and Review on Pea Protein Utilization • conduct a literature search and collate information improving the utilization of pea proteins R-86-08-0037	G.A. Wells Agdevco	ADF two years	3,175
Wild Rice Research in Saskatchewan • conduct a comprehensive research program in the areas of production, pest management, engineering, processing and marketing to meet the technical needs of the rapidly developing Saskatchewan wild rice industry R-86-08-0016	O.W. Archibold B.L. Harvey University of Saskatchewan and Saskatchewan Wild Rice Council Inc.	ADF three years	216,000

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The Lesser Clover Leaf Weevil *Hypera nigirostris*: Ecology and Control in Red Clover Seed Crops • define the seasonal history of the weevil on red clover; the economic threshold population, damage potential monitoring techniques; and cultural, biological and insecticidal control measures S-86-05-0015	C.H. Craig Agriculture Canada Research Station Saskatoon	SARF one year	7,350
Forage Demonstration • carry out trials and demonstrations with corn, fodder beets and turnip rape V-86-05-0048	H.J. Petersen Agrar Consulting (GMBH)	ADF three years	27,195
Forage Crop Research • provide incentives to forage associations or district boards for forage research and demonstration projects 1.3-2	D. Gayton Saskatchewan Agriculture	ERDA(P) four years	12,163
Increasing Forage Seed Production with Fertilizer • determine optimum combinations and timing of application of N, P, K and S fertilizer to maximize profits of forage seed production; determine effect of row spaces and age of stand on fertilizer recommendations; evaluate effectiveness of fertilizer on timothy, bromegrasses, crested wheatgrass and red clover R-87-05-0198	K. Stoner Newfield Seeds Ltd. Nipawin	ADF three years	25,850
Development of Native Legume *Glycyrrhiza lepidota* as a Potential Soil Reclamation and Forage Crop • determine the feasibility of domesticating wild licorice as a multipurpose crop with forage, soil stabilization and saline-site reclamation potential R-87-05-0215	A. Walther University of Regina	ADF two years	4,000
International Market Study of the Jerusalem Artichoke • determine the availability of the international markets for Jerusalem Artichoke V-87-09-0098	D. Jensen Artichoke Feed, Food and Fuel, Inc. Saskatoon	ADF one year	3,000

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Market Study of Jerusalem Artichokes • study the domestic produce market for Jerusalem artichokes to determine which areas are the most accessible and profitable and which should be developed V-86-09-0085	J. Beckton Beckton Agricultural Finance and Management Consulting Services Saskatoon	ADF two years	4,000
Experimental Production of *Pleurotus* (oyster) Mushrooms in Potash Mines of Saskatchewan • investigate feasibility of growing oyster mushrooms underground in potash mines V-86-08-0052	K. Sosulski Saskatchewan Research Council	ADF two years	50,000
Market Potential and Export Viability for Saskatchewan-Grown Seed Potatoes to the Pacific North West Region of the United States • identify seed potato market potential in the Pacific Northwest United States R-86-08-0178	S. Garven Harvest Foods Ltd. and Saskatchewan Vegetable Growers Association	ADF one year	4,000
Underground Garden • examine the feasibility of using underground space in a potash mine for growing various plant species 1.1-12	B. Taylor Potash Corporation of Saskatchewan	ERDA(P) one year	8,800
Horticulture Development • develop varieties suitable for Saskatchewan conditions and enhance horticulture production 1.1-8	C. Stushnoff University of Saskatchewan	ERDA(P) four years	184,665
Market Feasibility Study of a Plant for the Manufacture of Prepared Mustard Products in Saskatchewan • establish the feasibility of manufacturing and marketing a line of prepared mustard products for sale in Canada and in export markets V-86-09-0097	J.P. Melin Delisle Food Processors Inc.	ADF two years	4,500

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Native Berry Picking and Marketing • promote Northern Saskatchewan berry production and market development 1.4-9	J. Hemstad SIAP Marketing Company Inc. Prince Albert	ERDA(P) three years	20,000
Nature Berry-Blueberry Mint Jam/Cranberry Sauce • develop and refine process and recipe for gourmet products from native berries V-86-08-0066	E. and E. Keller Nature Berry Inc.	ADF one year	5,000
Rooting of *Amelanchier alnifolia* Produced *in vitro* and the Subsequent Establishment of Rooted Shoots Under Greenhouse or Field Conditions • propagation of Saskatoons S-86-05-0041	C. Stushnoff University of Saskatchewan	SARF one year	8,100
Evaluation of Sources of Resistance to Speckled Leaf Blotch of Wheat • identify sources of resistance to *Septoria tritici*, determine the genetic inheritance of resistance and incorporate resistance into adapted spring and winter wheat cultivars S-86-05-0040	G.R. Hughes University of Saskatchewan	SARF one year	11,250
Biology and Biological Control Potential of a Wheat Midge Parasite, *Pirene penetrans* in Saskatchewan • evaluate the potential of *Pirene penetrans* as a biological control agent of wheat midge in Saskatchewan R-86-05-0113	J.F. Doane Agriculture Canada Saskatoon	ADF two years	21,286
Biology and Control of the Wheat Blossom Midge in Saskatchewan • determine ground beetle species predators of wheat midge, their seasonal distribution and harmful effects of insecticides S-85-05-0001	J.F. Doane R.H. Elliot Agriculture Canada Research Station Saskatoon	SARF one year	1,000

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Studies on Resistance in Wheat to *Septoria nodorum* Blotch and Tan Spot • provide the basis for developing wheat varieties resistant to *Septoria nodorum* blotch and tan spot caused by *Pyrenophora triticirepentis* R-86-05-0171	G. R. Hughes University of Saskatchewan	ADF three years	32,970
Breeding for Resistance to Leaf Rust in Durum Wheat • obtain information about the inheritance of leaf rust resistance in durum wheat, identify new sources of resistance and produce good combinations of resistance for use in durum breeding programs R-86-05-0172	D.R. Knott University of Saskatchewan	ADF three years	9,060
Chemical Control of Seedling Damping-Off and Root Rot in Canola by *Rhizoctonia* • conduct study towards chemical control of *Rhizoctonia* root rot complex in canola R-87-05-0231	P.R. Verma Agriculture Canada Saskatoon	ADF two years	5,000
A Re-Evaluation of Seed Treatments for Pulse Crops • reassess the value of fungicidal seed treatment and assess new compounds S-85-05-0007	R. Morrall University of Saskatchewan	SARF one year	2,700
The Biological Control of Leafy Spurge • determine the host range and acceptability for introduction of that which occurs on leafy spurge on the USSR steppes R-86-05-0185	P. Harris Commonwealth Institute of Biological Control Switzerland	ADF three years	40,000

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Biohazard Assessment of a Biological Control Agent for Grasshoppers: *Nosema locustae* • assess the biohazard of *Nosema locustae* to mammals, other non-target vertebrates and invertebrates, and use the data to have a registration of *Nosema locustae* approved as a biological grasshopper control agent R-86-08-0018	H.B. Schiefer University of Saskatchewan	ADF three years	98,270
Biodegradation of Trichothecene Fungal Toxins • search for bacteria in Saskatchewan capable of degrading mycotoxins *in vitro* S-86-05-0054	G.G. Khachatourians University of Saskatchewan	SARF one year	17,000
Stability of GLA and EPA under Model and Commercial Storage Conditions • elucidate the oxidation rate and products of eicosapentanoic and gamma linolenic acids S-86-07-0055	A.R. McCurdy University of Saskatchewan	SARF one year	5,000
Grasshopper Management: Crop Resistance • develop control strategies for grasshoppers by breeding natural resistance into crops 1.2-8	C. Hinks Agriculture Canada Research Station Saskatoon	ERDA(F) three years	49,000
Responses of Diamondback Moths, *Plutella xylbstella* (L) and Other Insect Pests to Volatile Compounds of Cruciferous Crops • provide information to plant breeders and genetic engineers which is useful in the development of varieties of cruciferous crops resistant to insect attack, and develop novel methods for insect pest population and control R-86-05-0129	C. Gillott University of Saskatchewan	ADF three years	25,000
Acarine Mite and Honeybee Overwintering • test whether the Acarine mite that has affected honeybees in the United states of America overwinters in Saskatchewan 1.1-7	J. Gruszka D. Peer Saskatchewan Beekeepers Association	ERDA(P) four years	16,000

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Control of Sunflower Insects • develop technology for controlling insects in sunflowers 1.2-3	A. Arthur Agriculture Canada Research Station Saskatoon	ERDA(F) four years	41,900
Algae Control in Farm Ponds • increase the understanding of interactions between environmental factors, management practices and nuisance algal blooms in Saskatchewan farm ponds R-86-12-0163	S.M. Swanson Saskatchewan Research Council	ADF one year	48,044
Algae Control in Ponds • devise effective practical treatment strategies for control of algae in farm ponds R-87-07-0241	S.M. Swanson Saskatchewan Research Council	ADF one year	35,000
Control of Scentless Chamomile • develop ways of using cultural, biological and chemical means to control scentless chamomile 1.2-2	G. Bowes Agriculture Canada Research Station Regina	ERDA(F) four years	60,300
Weed Control Research • determine which herbicides and herbicide treatments can be successfully used for control of broad leaved and grass weeds in special crops, investigate specific weed control problems and study application technology R-86-05-0074	B.L. Harvey University of Saskatchewan	ADF one year	52,869
Physiology of Salt Tolerance in Crop Plants • investigate the processes of salinity tolerance in crops for use in selecting and breeding salinity-resistant cereal plants 1.1-6	B.L. Harvey University of Saskatchewan	ERDA(P) four years	200,000

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Variable Rate Fertilizer • evaluate a system of soil testing, mapping and application of a variable rate of fertilizer depending upon the requirements 1.1-10	B. Bens Agro-Tech Systems Inc.	ERDA(P) two years	16,260
Viability of Fermentation Products • examine all market sensitivity figures on grain alcohol products, consider the economic viability of grain alcohol plants and determine the economic effect when integrated with a cattle feeding operation V-86-07-0022	W. Wildeman Pound-Maker Feeders Ltd. Lanigan	ADF two years	29,260
Pound-Maker Existing Feedlot - Ethanol Plant Integration • develop the necessary data to determine the feasibility of the addition of grain fuel ethanol plant addition to the existing feedlot complex in Lanigan V-87-07-0129	W. Wildeman Pound-Maker Feeders Ltd. Lanigan	ADF one year	30,000
Borage Agronomy and Harvesting • develop initial borage agronomy and select varieties from the mixed and weed stock available from Europe, plus develop harvesting techniques V-86-05-0091	B. Sagen Borage Growers Association Inc. Kenaston	ADF one year	30,000
LIVESTOCK			
Dairy Study • set up and coordinate the collection and analysis of information on the cost of production for fluid milk using actual farm data	S. Barber Milk Control Board	Saskatchewan Agriculture one year	22,000
Dairy Research • nutrition and herd management of dairy cattle	D. Christensen University of Saskatchewan	CMDF one year	50,000
Dairy Production and Feed Evaluation • develop improved dairy cattle feeding rations 2.2-13	D. Christensen University of Saskatchewan	ERDA(P) four years	35,000

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Dairy Management, Housing and Physical Characteristics of Dairy Cattle • improve the management and efficiency of dairy herds through computerized record keeping 2.3-5	D. Christensen University of Saskatchewan	ERDA(P) four years	40,000
Evaluation of Protein Status of Lactating Dairy Cows • evaluate a method for determining the adequacy of dietary protein in high-producing dairy cow diets in early lactation through milk urea content S-85-01-0018	D. Christensen V. Racz University of Saskatchewan	SARF one year	8,500
Pregnancy Checking Promotion • promote the value of pregnancy checking for improved productivity of cow-calf operations 2.1-8	R. Donald Saskatchewan Agriculture	ERDA(P) three years	10,257
Pregnancy Checking Promotion • promote the value of pregnancy testing for improved productivity of cow-calf operations 2.1-4	H. Cook Agriculture Canada (PFRA) Regina	ERDA(F) four years	61,800
Conformation Determination System(CDS) as a Tool for Use in Genetic Improvement of Cattle • complete the development of CDS and prepare it for field trials 2.4-21	P. Greenough University of Saskatchewan	ERDA(P) one year	15,480
Embryo Cryogenics • determine factors affecting survival of bovine embryos during freezing 2.1-7	R. Maplestoft University of Saskatchewan	ERDA(P) four years	75,000

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Reproductive Loss in Cattle by Chromosome Abnormalities • improve conception rates in Saskatchewan cattle, reduce the number of embryonic and fetal deaths in cattle and reduce the calving intervals 2.1-13	P. Flood University of Saskatchewan	ERDA(P) two years	40,000
Evaluate Practical Post-Partum Nutritional and Drug Management in Controlling Breeding of Beef Cows • evaluate the inter-relationship between post-partum nutritional levels in beef cows and the use of hormones and prostaglandins to regulate estrus S-86-01-0013	D. McCartney A. Robertson W. Cates R. Mapletoft University of Saskatchewan and Agriculture Canada Research Station Melfort	SARF one year	3,600
Livestock Nutrition Technology Transfer • promote the use of the Saskatchewan Feed Testing Laboratory 2.2-3	V. Racz Saskatchewan Feed Testing Laboratory	ERDA(F) four years	75,600
Hormone Assays for Reproductive Research in Cattle supply a technician to provide hormone assays	N. Rawlings University of Saskatchewan	HCF one year	5,000
Anestrus Study • determine if the use of short-term steroid treatments can maintain the desired calving interval for beef cows 2.1-2	J. Manns University of Saskatchewan	ERDA(F)	5,000
Bull Performance Test Centre • upgrade and expand facility and provide operating funds to enhance its genetic improvement efforts 2.2-4 2.2-5	L. Bezan Saskatchewan Beef Cattle Performance Association	ERDA(F) four years	97,700
Effects of Season and Weather on Growth Rate of Bulls in the Saskatchewan Bull Test Station • determine the interrelationships of season and climate on growth rate and feed intake of bulls S-86-01-0048	G. Christison University of Saskatchewan	SARF one year	8,000

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Study of Founder-Like Changes in the Hooves of Beef Cattle Under Intensive Feeding Conditions • compare normal anatomy of the corium of the hoof with histopathological changes resulting from nutritional; investigate correlations between shape, size, sole thickness, horn hardness, chemical composition and occurrence of hemorrhages in hooves under intensive and non-intensive feeding; compare chemical analysis of horn hoof pre-trial and post-trial to identify if any mineral or amino acid deficiency is present R-86-01-0149	P. Greenough University of Saskatchewan	ADF two years	25,000
Pathophysiology of Testicle Size in Yearling Bulls • determine the relationship between scrotal circumference measurement in yearling ROP beef bulls of different beef breeds and various other functional parameters 2.1-14	W. Cates University of Saskatchewan	ERDA(P) two years	40,000
Bull Weight "Let Down" • document the relationship between changes in body weight and the fertility of two year old beef bulls 2.1-1	W. Cates University of Saskatchewan	ERDA(F) one year	12,000
Improvement of Production Efficiency of Livestock by Vaccination Against Somatostatin • investigation into growth systems in sheep, dairy and beef cattle S-86-01-0036	B. Laarveld University of Saskatchewan	SARF two years	22,500

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Somatostatin-Autoimmunization • improve somatostatin immunization methods with subsequent evaluation in lambs, swine, beef and dairy cattle 2.1-11	B. Laarveld University of Saskatchewan	ERDA(P) two years	80,000
Testing New Immunomodulators and Adjuvants • investigate infectious diseases in food producing animals 2.4-3	S. Acres Veterinary Infectious Diseases Organization (VIDO)	ERDA(P) four years	75,000
Testing a Vaccine for Viral Calf Scours • determine whether one booster vaccination is sufficient and determine best time to admister booster S-85-01-0016	S. Acres Veterinary Infectious Diseases Organization (VIDO)	SARF two years	5,600
Grant to VIDO • study of infectious diseases V-86-01-0054	S. Acres Veterinary Infectious Diseases Organization (VIDO)	ADF multiple years	300,000
Veterinary Infectious Diseases Organization • respiratory research in cattle	S. Acres Veterinary Infectious Diseases Organization (VIDO)	CMDF one year	75,000
The Immunopathogenesis of Bovine Herpesvirus-1 Infection in Calves • emphasize the previously unstudied role of specific immune cells in the whole animal in controlling or exacerbating infections caused by this virus 2.4-22	C. Doige University of Saskatchewan	ERDA(P) three years	12,000
Development of a Subunit Vaccine for Control of Shipping Fever • test immunogenicity and protective capacity of bovine herpesvirus-1 (BHV-1) glycoproteins expressed in baculovirus and test BHV-1 glycoproteins produced in micro-carrier cultures for their immunogenecity and protective capacity 2.4-23	S. van den Hurk Veterinary Infectious Diseases Organization (VIDO)	ERDA(P) one year	12,500

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Development of Subunit Vaccines for Control of Herpesvirus-1 Induced Respiratory Disease • test immunogenicity and protective capacity of purified infectious bovine rhinotracheitis and develop an ELISA assay S-86-01-0033	S. van den Hurk Veterinary Infectious Diseases Organization (VIDO)	SARF one year	13,500
Shipping Fever Complex • conduct field tests to study the effectiveness of two new types of shipping fever vaccine 2.4-13	F. Weeks Unity Veterinary Clinic	ERDA(P) one year	4,000
Shipping Fever/Scours Vaccines • improve the effectiveness of vaccines for some types of shipping fever and calf scours 2.4-12	S. Acres Veterinary Infectious Diseases Organization (VIDO)	ERDA(F) three years	38,600
Gastro-Intestinal Helminth Parasitism in Saskatchewan Cattle: An Abattoir Survey • packing plant survey of gastro-intestinal worm parasites in Saskatchewan	L. Polley University of Saskatchewan	HCF one year	6,000
Value of Parenteral Copper Glycinate, Oral Sustained Release Copper Oxide Needles and Trace Mineral Supplemented Salt in Improving the Copper Status of Beef Cows and Their Calves • determine the value of a presently available free-choice trace mineral supplemented salt of parenteral copper glycinate not yet approved for commercial use in Canada and a rumen bolus of copper oxide needles 2.4-20	M. Smart University of Saskatchewan	ERDA(P) three years	35,538

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Interactive Effects of Copper Molybdenum, Sulfur and Thiamin Metabolism in Cattle • conduct multi-disciplinary research into metabolism of trace minerals and thiamin; evaluate the levels of Cu, Mo, S and thiamin interaction to produce deficiency symptoms; and develop thiamin assay to estimate the total and available thiamin in feed, tissues and body fluids R-87-01-0289	D. Christensen University of Saskatchewan	ADF one year	40,000
Dietary Sulfate-Copper Induced Thiamin Deficiency in Livestock • determine if high copper (Cu) in the presence or absence of excess sulfur (S) depletes animals of thiamin (B1) and if supplemental B1 can prevent this S-86-01-0047	D. Christensen University of Saskatchwan	SARF one year	20,000
Evaluation of Vitamin E Status in Cattle • check vitamin E status in cattle	B. Blakely University of Saskatchewan	HCF one year	8,000
Pharmocokinetic Studies of Cefazolin in Horses and Cattle • determine feasibility of slowing the absorption of cefazolin after intramuscular injection for the purpose of sustaining efficacious blood concentrations in large animals R-86-01-0058	M. Papich University of Saskatchewan	ADF two years	32,650
New Pasture and Grazing Technologies • conduct forage trials to demonstrate the effectiveness of new grassland management techniques 2.5-2	W. Pyle Saskatchewan Agriculture	ERDA(P) three years	224,534
Livestock Facility and Pasture Management • provide modern livestock handling facilities at public pastures in each region 2.4-2	S. Lauder Saskatchewan Agriculture	ERDA(P) four years	78,628

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Intensive Pasture Management for Beef Production • measure the effect of fertilizers and plant growth regulators on the nutrition and production of beef cattle R-87-01-0288	D. Christensen University of Saskatchewan	ADF one year	70,000
Productivity and Reproductive Performance of Herds in Northeast Saskatchewan • a herd health program in R.M. #394 2.4-4	L. Purves RM of Hudson Bay #394	ERDA(P) three years	21,750
An Investigation of the Market Opportunities for Product Differentiated Saskatchewan Beef • identify the changing needs of consumers as they apply to beef through the development of differentiated products to meet the needs of the user 2.6-5	G. McGlaughlin Saskatchewan Wheat Pool	ERDA(P) one year	55,000
Beef Upgrading Management Program (BUMP) • produce a beef management manual for use in a pilot project that will demonstrate the value of good management systems 2.4-10	P. Rempel Saskatchewan Agriculture	ERDA(P) two years	78,874
All Canadian Hereford Display Center • advertise the display centre concept through visits, advertising and video promotion 2.6-6	S. and C. Palmer EXL Ranch Ltd. Marsden	ERDA(P) three years	10,000
Melfort Forage Handling Study • improve beef nutrition by developing better systems for harvesting, preserving and using forage 2.2-1	S. Beacom Agriculture Canada Research Station Melfort	ERDA(F) four years	59,900

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Feeder Cattle Performance Testing • demonstrate the importance of the feedlot industry, highlighting performance and market development 2.1-10	K. MacDonald Saskatchewan Feeder Cattle Association	ERDA(P) two years	35,000
Saskatchewan Feed Testing Laboratory • assist the laboratory in the development and implementation of a plan for the laboratory to be self-sustaining from user fees	V. Racz University of Regina	HCF one year	65,000
Protein and Energy Requirements for Feedlot Cattle • determine the protein and energy requirements for feedlot cattle with respect to carcass gain, feed conversion, climate, protein quality, weaning and sex R-87-01-0229	R. Cohen University of Saskatchewan	ADF three years	30,000
Dietary Protein and Energy Requirements of Feedlot Cattle Differing in Mature Body Size • evaluate performance and carcass characteristics of large and medium framed calves fed diets varying in energy and protein content S-86-01-0051	R. Cohen University of Saskatchewan	SARF one year	20,000
Ammoniated Flax and Wheat Residues as Winter Feed For Beef Cows • determine if flax and wheat residues can be ammoniated to form a maintenance ration 2.2-9	J. Kernan Flax Growers Association of Western Canada	ERDA(P) two years	39,090
Improve Canola Meal Feed Value and Simultaneously Produce Food-Grade Protein by Ultrafiltration Technology • identify efficient solvents for dispersing the protein and for solubilizing the various constituents contributing to lower feed value in commercially available canola meal; identify ultrafiltration parameters; evaluate the market value of the process R-86-01-0152	S.M. McCurdy POS	ADF one year	19,085

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Near Infrared Analysis of Feedstuffs • calibrate a near infrared analyzer to Saskatchewan feedstuffs 2.2-6	V. Racz Saskatchewan Feed Testing Laboratory	ERDA(P) four years	19,000
Improving the Agronomics and Feed Value of Kochia • investigate different varieties of kochia and growing conditions related to feed value 2.2-10	E. Coxworth Saskatchewan Research Council	ERDA(P) three years	44,276
Preconditioned Feeder Program II • provide support for a second year of the preconditioned feeder program 2.6-2	P. Greenough Saskatchewan Veterinary Medical Association	ERDA(P) two years	35,000
Further Studies on Enzymatic Improvement of Saskatchewan Grown Feedstuffs • increase the competitiveness of Saskatchewan grains in the local and international poultry feed markets R-86-01-0168	H. Classen University of Saskatchewan	ADF one year	8,000
Chaff Ammoniation of Awned Crops • investigate chaff ammoniation for feed value and response to ammoniation 2.2-14	J. Kernan Saskatchewan Research Council	ERDA(P) two years	13,000
Horse Industry Study • identify growth opportunities and industry options and focus the analysis of data of the horse industry on the economic implications of alternative strategies that may be identified 2.6-4	J. Nelson Agriculture Development Corporation of Saskatchewan	ERDA(P) one year	38,000
Nutrition in Horses • study feed utilization of horses and steers and study feed management as it relates to development of growing horses R-86-01-0146	N.F. Cymbaluk University of Saskatchewan	ADF three years	65,000

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Swine Herd Technology Transfer • establish an educational and informational information mechanism for pork producers 2.4-8	J. Morris Saskatchewan Pork Producers Marketing Board	ERDA(P) three years	60,000
Management Studies to Increase Sow Fertility • develop new, economically viable ways to improve the reproductive ability of commercial swine operations on the prairies 2.1-3	P.A. Thacker University of Saskatchewan	ERDA(F) four years	58,000
Pig Development for the 90's • research and develop a structurally improved breeding animal designed for longevity under variable management conditions, a highly prolific breeding female capable of rearing large numbers of progeny under variable management conditions, and a superior breeding animal forced to the limit of its growth performance capabilities without compromise to structural soundness and longevity 2.1-15	E. Johnson Northern Pig Development Co. Ltd.	ERDA(P) three years	250,000
Swine Housing • study environmental factors in commercial swine barns and effects on swine health and performance 2.3-1	E.M. Barber University of Saskatchewan	ERDA(F) four years	94,000
Evaluation of Farrowing Systems • evaluate currently available crates and floors for farrowing sows, and evaluate novel farrowing systems R-86-01-0148	G.I. Christison University of Saskatchewan	ADF three years	50,000
Swine Barn Ventilation • complete analysis of data collected and test the hypotheses concerning fans and fan controls, air inlet and air distribution, head exchangers and fan-heater interlocks S-85-01-0020	E.M. Barber University of Saskatchewan	SARF one year	12,000

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An Evaluation of Wheat in Feeding Market Pigs • compare 3M, hard red spring and winter wheat cultivars with barley in growing and finishing rations for pigs S-86-01-0008	J. Bell University of Saskatchewan	SARF one year	20,000
Investigating Chloride Conductance Inhibitors as Treatments for Neonatal and Weanling Diarrhea in Pigs • study the effects, activation and extent of inhibition of chloride conductance E-86-01-0007	G.W. Forsyth University of Saskatchewan	ADF three years	43,050
Study of Market Opportunities for Saskatchewan Lamb • identify characteristics of the market for Saskatchewan lamb and mutton and propose strategies for exploiting and developing markets 2.6-3	J. Koal Saskatchewan Sheep and Wool Marketing Commission	ERDA(P) two years	20,000
Saskatchewan Regional Shepherds' Program • provide on-farm training and technical assistance in shepherd skills and flock managment to new producers, and establish that a regional shepherds' program would benefit the sheep industry beyond the cost of the project 2.4-19	J. Koal Saskatchewan Sheep and Wool Marketing Commission	ERDA(P) two years	10,000
Intensification of Sheep Production • apply techniques of reproductive management for intensifying lamb production S-85-01-0017	N.C. Rawlings W.E. Howell C.S. Rhodes R.A. Shoney University of Saskatchewan	SARF one year	15,000

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A Serological, Hematological, Parasitological and Biochemical Survey of Domestic Elk Herds in Saskatchewan • establish normal hematological and biochemical values for domesticated elk, obtain serum samples for serological data collection on potential infectious disease exposure and store and freeze serum samples for retrospective serological studies on infectious diseases which may be epidemiologically significant in the future 2.4-24	A. McIssac Wawota	ERDA(P) three years	10,000
Herd Health of Game Farm Animals • study the effects of two vaccines to combat disease in various deer species on Saskatchewan game farms 2.4-15	J. Haigh Saskatchewan Game Farmers Association	ERDA(P) two years	15,000
Use of Alpha-2 Adrenoreceptor Antagonists to Relieve Ruminal Status in Ruminal Lactic Acidosis (Grain Overload) • determine if administering drugs results in re-establishment of forestomach motility when ruminal stress has occurred in ruminants S-86-01-0003	E.C. Crichlow University of Saskatchewan	SARF one year	18,000
Re-Establishment of Forestomach Motility in Grain Overload • investigate methods of re-establishing rumen activity in cattle with grain overload	E. Crichlow University of Saskatchewan	HCF one year	11,000
Game Farming Industry Service and Research • produce an information manual and organize field days and training seminars for game farmers 2.1-9	J. Haigh University of Saskatchewan	ERDA(P) three years	10,000
Increasing the Market Potential of Saskatchewan Feed Grains for Poultry • improve the market potential of Saskatchewan feed grains for poultry R-87-01-0228	H. Classen University of Saskatchewan	ADF three years	50,000

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Energy Analysis of Alternative Combinations of Building Environment, Heat Recovery Systems and Solar Heating Systems for a Broiler Chicken House • verify that DOE-2 can accurately predict the energy usage in an existing facility, identify and prioritize factors which significantly affect the energy use and predict the energy usage that results from several different indoor temperature cycles 2.3-10	M. Bantle Bantle Engineering Research	ERDA(P) two years	12,000
Blood Testing in Saskatchewan Poultry • demonstrate the use of new technology in testing poultry blood samples and use of data obtained in improving disease control V-86-01-0071	C. Riddell University of Saskatchewan	ADF two years	20,000
VIDO (Fellowship) • develop and apply improved serological and immunological methods of diagnosing and monitoring important infectious diseases of livestock and poultry V-86-01-0056	S. Acres Veterinary Infectious Diseases Organization (VIDO)	ADF four years	100,000
Feedlot Development • develop large-scale feedlot complexes in two areas of the province; one in the Melfort area and one in the Central Butte area V-86-01-0059	J.A. Storey Beef Industry Developments Ltd. Melfort	ADF two years	16,000
North Saskatchewan Beef Demonstration Project • increase productivity, improve profitability with greater awareness and satisfaction in proper management of the beef enterprise 2.4-14	B. Allen Prince Albert Beef Producers Association	ERDA(P) two years	45,000

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Swift Current Grazing Study • minimize feed costs by using adapted varieties and improved grazing management of pastures 2.2-2	N. Holt Agriculutre Canada Research Station Swift Current	ERDA(F) four years	71,600
Reproductive Data Collection • develop a computer data collection system to monitor the reproductive status of each sector of the livestock industry 2.1-6	D. Sim Saskatchewan Agriculture	ERDA(P) four years	34,066
Roles of Insulin, Glucose and Free Fatty Acids in the Development of Ketosis and Fatty Liver Disease in Ruminants • investigate metabolic parameters responsible for development of ketosis and fatty liver disease; study of insulin, free fatty acids and glucose and determine balance of metabolites and hormones S-85-01-0019	R. Chaplin University of Saskatchewan	SARF one year	1,600
Water Quality Improvement • research improvement of farm water by removing sulphates 2.2-12	D. Christensen University of Saskatchewan	ERDA(P) four years	25,000
Control of Chalkbrood and Other Fungal Problems in Leaf-cutter Bees • study control methods that will increase the survival of leaf-cutter bees 2.3-4	R. Herperger Saskatchewan Alfalfa Seed Producers Association	ERDA(P) two years	15,000
Field Testing of a New Strain of Leaf-cutting Bees • determine if the selected trait of no field emergence of bees during the growing season is stably inherited in different areas, and evaluate other desirable biological traits V-86-08-0004	G. Rank Saskatchewan Alfalfa Seed Producers Association	ADF two years	10,000
Overwintering Survival of Anaplasmosis • determine if ticks act as an overwinter host for anaplasmosis 2.4-9	J. Saunders University of Saskatchewan	ERDA(F) three years	10,000

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Tracheal Mite • determine the effect of tracheal mite infestation on overwintered honeybee colonies 2.4-18	D. Peer Saskatchewan Beekeepers Association	ERDA(P) two years	35,000
Lands Branch Black Fly Control Program • demonstrate methods of black fly control to producers and community pasture patrons 2.3-7	G. O'Bertos Saskatchewan Agriculture	ERDA(P) two years	10,795
Black Fly Control • develop and test new or improved methods of controlling black flies 2.3-2	C. Mulligan Saskatchewan Agriculture	ERDA(P) two years	5,743
IRRIGATION			
Irrigation Projects • for on-farm irrigation development 4.1-1	A. Lukey Irrigation Branch Saskatchewan Agriculture Outlook	ERDA(F) one year	1,309,100
Irrigation Assistance Program • promote irrigation on Saskatchewan farms by providing financial assistance for on-farm irrigation development 4.2-1	G. Gross Saskatchewan Agriculture, Outlook	ERDA(P)	600,000
Saskatchewan Water Corporation • implementation of irrigation development programs V-86-03-0067	V. Fowke Saskatchewan Water Corporation	ADF multiple years	15,000,000

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Saskatchewan Irrigation Development Centre General Support Services • provide for supplemental support services for numerous irrigation research and demonstration projects being managed by the Saskatchewan Irrigation Development Centre V-86-03-0021	L. McLean Agri-Farm Consultants Ltd. Strongfield	ADF four years	195,000
Assessment of Area Specific Economics of On-Farm Irrigation Development • develop a simulation model for on-farm decision making with respect to irrigation under Saskatchewan conditions R-86-03-0043	S.N. Kulshreshtha University of Saskatchewan	ADF four years	23,600
Assessing the Agronomic and Environmental Impacts of Using Poor Quality Groundwater for Irrigation • assess changes in salinity of soils irrigated with groundwater, determine if changes in quality of water in continuous surface aquifers can be related to the leaching of salts from the irrigated fields and assess the impact on source aquifers when groundwater is pumped for irrigation R-86-03-0118	J.A. Gillies University of Saskatchewan	ADF three years	15,900
Herbicide, Nutrient and Water Drainage from an Irrigated Field • determine the amount and quality of surface and subsurface drainage water after a rainfall and irrigation, irrigation efficiency, the opportunity for the reuse of irrigation drainage water and the effect of application techniques R-86-03-0056	W.N. Nicholaichuk National Hydrology Research Institute (NHRI)	ADF two years	19,700
Plant Diseases of Irrigated Cereal • assess the incidence and severity and evaluate control methods of plant disease on irrigated cereals R-86-03-0017	L.J. Duczek Agriculture Canada Research Station Saskatoon	ADF four years	27,500

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Screening for Phytopath Resistance in Cereal, Pulse and Oilseed Crops for High-Moisture Environs of Saskatchewan • establish an intensive irrigation field disease screening system at the University of Saskatchewan and begin disease screening for resistance to various diseases R-86-03-0051	B.L. Harvey University of Saskatchewan	ADF four years	21,200
Evaluation of Field Bean as an Alternative Grain and Seed Crop for Irrigated Regions of Saskatchewan • determine the potential of dry beans as an alternative short-season irrigated crop; search for higher yielding, early maturing cultivars and generate information on crop management practices to optimize yield and quality R-86-03-0045	A. Slinkard University of Saskatchewan	ADF three years	37,350
Optimizing Yields for Production of Industrial Starch and Table Stock Potatoes in Saskatchewan • determine which cultivars will regularly yield the maximum quantity of starch per unit area under irrigated production,and demonstrate agronomic and irrigation techniques R-86-03-0042	D.H. Dabbs University of Saskatchewan	ADF four years	16,100
Management of Forage Production Under Irrigation • establishment of nine forage field trials for comparison purposes at Outlook Irrigation Centre R-86-03-0040	B. Goplen Agriculture Canada Research Station Saskatoon	ADF four years	32,000

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Long-Term Improvement of Forage Production on the Maple Creek Irrigation Project • develop a data base of the existing problems and soil conditions in the Maple Creek irrigation project and recommend demonstration projects aimed at modifying soil and management conditions to improve crop yields V-86-03-0047	D.R. Cameron Normac A.E.S. Ltd. Swift Current	ADF one year	16,430
Irrigated Sheep Pasture • determine if intensive sheep management along with irrigated forage production can produce a reasonable return to the producer 2.5-1	J. Koal Saskatchewan Sheep and Wool Marketing Commission	ERDA(P) three years	6,450
SOILS			
Management of Organic Soils • investigate crop production on organic soils with particular emphasis on soil fertility and tillage practices R-86-05-0180	W.K. Head Head Consulting	ADF three years	36,724
"Save Our Soils" Soil Conservation Awareness and Demonstration Program • reduce soil degradation in the district, increase exposure and awareness of ongoing soil conservation practices among local producers and increase data collection from local projects 3.1-9	J. Moen Jim Moen Consulting, Ltd. Regina	ERDA(P) three years	187,269
Soil Conservation and Management • reduce soil degradation problems by providing an on-farm soil conservation service and increasing public awareness of the need for soil conservation 3.1-1	G. Luciuk Agriculture Canada (PFRA) Regina	ERDA(F) five years	2,289,500
Conservation Farming • support a "Conservation Farming Practices" program conducted in District #6 3.1-7	D. McKell District Board #6 Indian Head	ERDA(P) three years	10,000

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Economics of Reduced Tillage Systems in Saskatchewan/The On-Farm Economic Costs of Soil Erosion • determine the short and long-run economic consequences of soil erosion, the implications of adopting alternative minimum and zero-tillage systems and the economic costs of restoring soil productivity S-86-04-0017 S-86-04-0018	R. Zentner University of Saskatchewan	SARF one year	20,000
Soil Conservation Mapping • complete a soil resource data base for Saskatchewan which can be used to improve soil conservation efforts in the province 3.1-2	D.F. Acton University of Saskatchewan	ERDA(F) five years	347,700
Land Use Change and Soil Conservation in Southwestern Saskatchewan • identify the causes, extent and impacts to soil of crop production on marginal farmland in the Swift Current Region in Southwestern Saskatchewan R-87-08-0221	L. Potter Southwest Regional Agricultural Council Gull Lake	ADF two years	23,082
Soil Conservation Through Extended Rotations • initiate and manage a soil fertility field research program in East Central Saskatchewan to help create an awareness of the importance of effective fertilizer application in making extended crop rotations practical and profitable 3.1-10	J. Harapiak Western Co-operative Fertilizers Ltd. Calgary	ERDA(P) one year	68,000

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Extended Crop Rotations and Conservation Tillage Project • demonstrate the profitability of extended rotations and the value of conservation tillage 3.1-6	B. Kennedy Hoechst Canada Ltd. Regina	ERDA(P) three years	136,890
The Effect of Long-Term Rotations on the Active Fraction of Organic Matter and Soil Tilth • evaluate effects of cropping systems on nutrient-supplying capabilities of soil organic matter S-86-10-0063	D. Anderson University of Saskatchewan	SARF one year	14,500
Materials Data-Base for Tillage Tools • determine and evaluate a range of materials for tillage tools S-86-02-0026	S. Bhole University of Regina	SARF one year	8,300
Soil Survey • complete a soil resource data base for Saskatchewan which can be used to improve soil conservation efforts in the province 3.1-3	D.F. Acton University of Saskatchewan	ERDA(P) four years	300,000
Saskatchewan Soil Survey • complete a survey of all soil types in the province R-87-10-0225	J.B. Stewart University of Saskatchewan	ADF three years	401,918
Maximizing Soil Production by Efficient Use of Water and Fertilizers and Integration of Soils, Climate and Production Data in Innovative Farming Systems • complete studies on maximizing crop productivity and maintaining high soil quality through implementation of water efficient farming systems R-87-10-0226	J. B. Stewart University of Saskatchewan	ADF three years	310,000
Fertilizer Placement • conduct field trials to demonstrate the importance of effective fertilizer placement in extended crop rotations 3.1-5	J. Harapiak Western Co-operative Fertilizers Ltd. Calgary	ERDA(P) two years	15,000

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Soil Fertility - Sulfur and Micronutrients • determine soil and plant needs for sulfur and other micronutrients by developing an improved soil test for sulfur 3.1-4	D. Tomasiewicz University of Saskatchewan	ERDA(P) four years	81,500
Nitrogen Fixation and Fertilization Efficiency • utilize annual grain legumes in a continuous system in Saskatchewan in order to conserve soils and improve quality V-86-10-0016	R.J. Rennie Esso Chemical Canada	ADF four years	83,080
Desiccation and Herbicidal Potential of Preharvest Applied Glyphosate • evaluate the desiccation potential and herbicidal potential of glyphosate when it is used late preharvest on wheat, flax, rapeseed, peas, barley and lentils V-87-10-0127	K. Goudy Focus on Inputs Association Inc. Melfort	ADF one year	15,000
Herbicide Stress on Symbiosis in Peas and Lentils • develop herbicide-tolerant rhizobium strains for field peas and lentils that are effective nitrogen fixers under herbicide stress, and assess the occurrence of mycorrhizal symbiosis 3.1-8	J.J. Germida Saskatchewan Pulse Crop Development Board	ERDA(P) two years	5,250
Determination of Trifluralin Herbicide Carryover Levels in Soils • examine whether an inexpensive bioassay procedure for trifluralin herbicides determines total soil content of the chemical or whether a more expensive analysis is necessary S-86-10-0038	R.B. McKercher University of Saskatchewan	SARF one year	17,100

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Evaluation of the Conserva-Pak Seeding System • conduct engineering research, evaluate and further develop seeding equipment for use in a conservation or zero-tillage operation 3.2-2	J. Halford Vale Farms Ltd. Indian Head	ERDA(P) one year	5,000
Snow Management and Meltwater Enhancement • study the benefits of snow management and meltwater infiltration 3.2-3	W. Nicholaichuk National Hydrology Research Institute (NHRI) Saskatoon	ERDA(P) three years	135,000
Critical Evaluation of Subsoiling Tillage (Deep Ripping) • study and evaluate subsoiling tillage practices in terms of effect on crop production, water use and soil structure R-86-10-0015	M.C.J. Grevers District Board #26 Tisdale	ADF two years	20,000
Mineralogy, Morphology and Dynamics of Salts in Agricultural Soils • identify minerals and their associates and investigate origins of salts to provide information for saline soil reclamation S-86-10-0037	A.R. Mermut R.J. St. Arnaud L. Henry University of Saskatchewan	SARF one year	14,400
Soil Salinity Research • investigate the causes of soil salinity by tracing groundwater movement 3.2-1	L. Henry University of Saskatchewan	ERDA(P) four years	325,000
An Integrated Approach to the Assessment and Mapping of Soil Erosion Risk in Southern Saskatchewan • develop an integrated cost-effective method of assessing and mapping soil erosion risk and degree of soil loss R-86-10-0140	D. Sauchyn University of Regina	ADF two years	1,500

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ENGINEERING			
A New Farm Packer System • develop an affordable and efficient packer system to trail behind air seeders V-87-02-0123	G. Bourgault F.P. Bourgault Industries St. Brieux	ADF three years	20,000
Portable Wheat Moisture Tester • develop a portable wheat moisture tester that is both technically and commercially viable V-87-08-0125	D. Thompson Bredenbury	ADF one year	15,000
Punch Seed and Fertilizer Placement Wheel for Conservation Farming • develop a spoked-wheel air seeder that can seed through large amounts of crop residue found on conservation farming fields, and fabricate and field-prove with on-farm testing a commercial spoked-wheel air seeder comparing yields with conventional conservation seeding methods R-86-02-0039	R.B. Rogers Rogers Engineering Inc. Saskatoon	ADF two years	20,000
Comparative Efficiency of New Low-Volume Applicators for Use With Herbicides • evaluate spinning disc nozzles for herbicide application on wheat under field conditions S-85-02-0024	R. Ashford K. Hatchard R.B. McKercher W.B. Reed University of Saskatchewan	SARF one year	1,250
Spray Technology • develop technologies that will increase the efficiency of pesticide application and thereby reduce costs to producers 1.2-1	R. Grover Agriculture Canada Research Station Regina	ERDA(F) four years	119,000

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Development of a Natural Air Drying System Using Horizontal Airflow • develop and test a prototype natural air drying system that speeds up drying and increases efficiency by distributing the air flow horizontally V-86-08-0072	K. Kernahan Univision Industries Ltd. Humboldt	ADF one year	15,000
Effects of Heating the Inlet Air with a Burner when Natural Air Drying • determine and compile a report on the effects of heating the air with a burner when natural air drying R-86-02-0117	D. Lischynski Prairie Agricultural Machinery Institute (PAMI) Humboldt	ADF one year	6,000
Investigation of the Design and Manufacturing Requirements for a Passively Controlled Automatic Air Inlet • a theoretical investigation into the operating principals of the passive air inlet systems, verification by laboratory measurements and development of guidelines for design and manufacture 2.3-12	M. Bantle Bantle Engineering Research Saskatoon	ERDA(P) one year	7,000
Evaluation of a PECO Berrymaster as a Harvester for Saskatoon Berries and Local Varieties of Raspberries • evaluate the suitability of a PECO Berrymaster for harvesting Saskatoon berries V-86-05-0093	E. Neufeld Riverbend Plantation Saskatoon	ADF one year	1,053
Electronics for Heat Detection • develop a pressure sensitive electronic device which could be implanted and used to record estrus events 2.1-12	J. Manns University of Saskatchewan	ERDA(F) two years	12,100
Device for Measuring Relative Humidity in Dusty Barns • develop and test a device for measuring relative humidity in dusty barns 2.3-8	E.M. Barber University of Saskatchewan	ERDA(P) two years	2,950

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Performance of Commercial Ventilation Controllers for Livestock Barns • study the performance of electronic and electromechanical controllers used in livestock barn ventilation systems 2.3-9	M. Jorgensen Prairie Agricultural Machinery Institute (PAMI) Humboldt	ERDA(P) two years	10,100
Testing and Development of a Universal "Stripper" Snow Trap Attachment • assess the results and carry out improvement required after testing and demonstrating prototype strippers, develop drawings and prepare an operating manual V-87-02-0111	M. Lloyd Bangwyn Farms Ltd. D'Arcy	ADF two years	25,000
Compressed Natural Gas (CNG)Testing • determine economic viability of CNG on Saskatchewan farms V-86-02-0014	M. Wrubleski P. Gebhardt Saskatchewan Agriculture M. Sulatisky Saskatchewan Research Council	ADF four years	416,224
File Hills Integrated Agricultural/Ethanol Project • complete a comprehensive engineering and infrastructure analysis and design for a fuel ethanol and livestock finishing complex, secure the necessary financing package to construct and operationalize the project, secure long-term contracts to sell ethanol products and increase employment opportunities for Indian people V-86-07-0080	S.D. Jaycock File Hills Agri-Energy Inc. Regina	ADF two years	150,000
CNG Demonstrations • extension of CNG demonstrations Saskatchewan farms V-87-02-0160	M. Sulatisky Saskatchewan Research Council	ADF two years	40,621

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HUMAN RESOURCES			
Equity Financing • survey of local investor potential respecting an equity financing initiative	T. Bryant Brystra Consultants	Saskatchewan Agriculture one year	29,895
Equity Financing • research and make presentations at public meeting on farm finance	L. Quance Agritrends Research Inc.	Saskatchewan Agriculture one year	19,790
Agricultural Equity Financing Companies in Australia and New Zealand • research equity financing arrangements in Australia and New Zealand	J. Halford Vale Farms Ltd. Indian Head	Saskatchewan Agriculture one year	2,300
Equity Capital Alternatives • investigate alternate methods of utilizing outside equity capital in agriculture and assess the relative merits of each	G. Simpson Carivale	Saskatchewan Agriculture one year	3,700
ERDA Audit - Supply and Services Canada Audit Bureau • establish and report on validity of costs incurred and contribution payments made, and ensure legislative requirements, terms and conditions of the applicable Sub-Agreement and contribution arrangements have been adhered to	C.W. Lefko Supply and Services Canada	Saskatchewan Agriculture one year	3,962
Test and Evaluate Procedures for More Effective Use of Market Information for Financial Planning • investigate the need for effective use of market information in financial planning by using "Marketing-Management Clubs" 5.1-6	R. Bens Farmwest Management Ltd. Saskatoon	ERDA(P) two years	15,000
Reverse Switch Proposal • study of reverse switch for feed grains	K. House Saskatchewan Feed Grain Users Association	Saskatchewan Agriculture one year	1,600

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Rural Economic Diversification • identify and aid development of alternative/supplementary enterprises for individuals and rural communities to broaden their economic base V-87-04-0119	H. Amundson Northwest Regional Diversification Committee Shellbrook	ADF two years	3,000
Revitalization of Agricultural Societies • develop methods to boost community participation in agricultural societies 5.2-11	H. Clark Saskatchewan Agricultural Societies Association	ERDA(P) two years	15,000
Farm Financial Management and Production Cost Data • collect cost of production data from Top Management farmers and conduct workshops to educate farmers to utilize cost of production data to better manage their farms R-86-04-0060	R.A. Schoney University of Saskatchewan	ADF one year	30,000
Market Development and Investment Promotion - Northern Agriculture Development • promote the consumption of northern food products, develop new market opportunities, establish a northern identity and new processing and product opportunities V-87-09-0134	M. McKay Saskatchewan Indian Agriculture Program (SIAP) Inc. Prince Albert	ADF one year	10,000

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A Project to Determine The Potential for Vendor Financing in Saskatchewan Agriculture • determine changes from traditional approaches to agreements for sale and lease-purchase options which hold potential for Saskatchewan agriculture and investigate the feasibility of a clearing house function as a part of a revitalized vendor financing market in Saskatchewan 5.2-16	W. Gamble Farmwest Management Ltd. Saskatoon	ERDA(P) one year	10,000
Future World Market Opportunities for Saskatchewan Wheat • a study to exploit future world market opportunities for Saskatchewan wheat	W. H. Furtan University of Saskatchewan	Saskatchewan Agriculture multiple years	50,000
Comparative Advantage of Wheat Production in Saskatchewan • comparison of costs and returns with producers in the United States, Australia, E.E.C. and U.S.S.R. S-85-04-0025	W. H. Furtan University of Saskatchewan	SARF one year	1,400
Strategic Funding • stimulate the establishment, provide continuing long-term support, promote co-ordination and co-operation and create an environment for research groups R-87-12-0223	G. Lee University of Saskatchewan	ADF one year	2,484,000
Administrative Services to College of Agriculture (ADF) • administer ADF at the University of Saskatchewan R-85-09-3038 R-86-12-0070	G. Lee University of Saskatchewan	ADF one year	8,185
Grant to POS Pilot Plant • protein, oil and starch research and development V-86-12-0055	Director POS Pilot Plant Inc.	ADF multiple years	25,000
Communications • support for a communications package for ADF V-86-12-0069	H. Johnson Saskatchewan Agriculture	ADF four years	108,100

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ADF Project Monitoring • determine support present in program areas V-87-12-0131	J. Taylor Saskatchewan Agriculture	ADF two years	7,764
Communications Officer • coordinate production of annual report, ADF newsletters, project reports and audio/visual presentations; and provide project information to the department, other government agencies and the media V-86-12-0050	H. Johnson Saskatchewan Agriculture	ADF four years	33,415
Food Processing Extension Coordinator • provide a Food Processing Extension Coordinator who will interface with industry, the university and government regarding the food processing industry in Saskatchewan V-86-06-0061	G.A. Jones University of Saskatchewan	ADF two years	40,000
Equity Financing for Indian Land Acquisition • develop a program to enable Indian farmers meeting an established criteria to acquire land off reserves with a combination of equity financing and personal resources V-87-12-0142	W. Davies Saskatchewan Indian Agriculture Program (SIAP) Inc. Regina	ADF one year	20,000
Study to Determine How More Equity Funding Can Be Obtained for Agri-Business Requiring Less Than $1M in Funds • determine how more equity financing can be obtained for small agri-businesses V-86-04-0088	J. Beckton Beckton Agricultural Finance and Management Consulting Services Saskatoon	ADF one year	10,000

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Western Grains Study • quantify the world demand for food and feed grains, examine the competitive strength of Canada's prairie agriculture in world export markets, and project further developments R-86-04-0195	J. Maxwell Economic Council of Canada Ottawa	ADF two years	180,000
Canola Marketing Review • prepare, publish and distribute a review of marketing canola and canola products 5.1-4	W. Cooper Saskatchewan Canola Growers Association	ERDA(P) one year	12,000
Farm Credit Corporation Farm Survey • survey of debt position of farmers	Farm Credit Corporation Ottawa	Saskatchewan Agriculture one year	20,000
Farm Input Price Survey • a survey regarding the level of variability of farm input prices between products and locations	S.N. Kulshreshtha University of Saskatchewan	Saskatchewan Agriculture multiple years	85,000
Farm Computerization Survey • conduct market research to determine the extent of computer use by farmers 5.1-5	D. Wiebe Agriview Management Langham	ERDA(P) one year	10,900
Agriculture Information System • design, develop and examine the potential of an agriculture interactive computer information system 5.1-11	D. Mintenko Cartel Electronics Moose Jaw	ERDA(P) two years	254,430
Horticulture Information Retrieval System • develop a computerized information system for horticultural crops for technology transfer to the public 5.1-9	S. Nelson University of Saskatchewan	ERDA(P) one year	10,480
International Wheat Growers Export Symposium • organization of an international grains symposium	W. Duke Western Canadian Wheat Growers Association	Saskatchewan Agriculture one year	25,000
Northern Agriculture Conference • conference support to address northern agriculture issues V-86-12-0092	K. Brunner Saskatchewan Indian Agriculture Program (SIAP) La Ronge	ADF one year	18,000

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Northern Agriculture Development • promote self-sufficiency in food production through promotion of home and community gardens, small-scale livestock production and improved storage and distribution of produce V-87-06-0116	K. Thomas Saskatchewan Indian Agriculture Program (SIAP) La Ronge	ADF one year	58,463
Provincial 4-H Communications Review • assess the effectiveness of 4-H Leaders' Bulletin V-87-06-0128	P. Katz Saskatchewan 4-H Council	ADF one year	5,010
Alfalfa Slide Tape Presentation - Korea • produce a Korean version of the Canadian Dehydrators Association alfalfa slide-tape presentation V-87-06-0130	D. Pulkinen Canadian Dehydrators Association Tisdale	ADF one year	1,299
Farm Safety Video Program • videos promoting farm safety 5.1-12	M. Zasada Saskatchewan Safety Council	ERDA(P) one year	30,000
An Investigation into the Machinery Modification Designed and Used by Saskatchewan Farmers with Physical Disabilities • produce an inventory of machinery modifications and aids used by Saskatchewan farmers with physical disabilities 5.1-14	R. Elian Saskatchewan Abilities Council	ERDA(P) one year	18,000
National Disabled Farmers Conference • increase awareness of the potential of farming as a viable and realistic occupation goal for disabled persons V-87-06-0143	T. Kennedy Saskatchewan Division Canadian Paraplegic Association	ADF three months	5,000
Meat Rabbit Producers Project • support for a technical review of available information V-87-06-0141	P. Sorenson Southwest Rabbit Producers Montmarte	ADF one month	500

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SARF - Saskatchewan Agricultural Research Fund

Title/Objective/Project Number	Project Manager/ Contractor/Institution	Funding Agency/ Project Length	Funding 1987-88
Economic, Market and Technical Feasibility Study for Large Scale Commmercial Mushroom Farming Operation in Inactive Potash Mines • technical, economic and market feasibility addressing market size, location, preferred mushroom type and related information V-87-04-0135	L. Wallace Controlled Growth Technologies Inc.	ADF one year	65,000
Saskatchewan Nursery Trades Enhancement Program • provide support to build and strengthen the provincial horticulture association by establishing a central clearing house for the industry, and provide a vehicle for the development of an education program D-86-04-0004	D. Land Saskatchewan Nursery Trades Association	ADF two years	25,000
Agricultural Use of Sludge from Regina Waste Water Treatment Plant • examine feasibility of utilization of sludge on agricultural land S-85-12-0021	T. Viraraghavan University of Regina	SARF one year	722
Implementation, Public Information and Evaluation • disseminate timely and useful information, evaluate program usefulness, implement and administer the agreement 6.0	J. Lowe Agriculture Canada	ERDA(F) five years	173,600
Feedstuffs Information Data Base for Saskatchewan Feeds • develop a computerized feedstuffs data base for Saskatchewan feeds 5.1-3	D.A. Christensen University of Saskatchewan Saskatoon	ERDA(F) three years	110,000
Microcomputer Training for Saskatchewan Farmers • increase computer knowledge among farmers and show the value of computers as a management tool 5.1-1	G. Blackmore Settler Computer Technologies Inc. Regina	ERDA(P) two years	4,500

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Microcomputer Training for Farmers Phase II • increase the level of computer literacy among Saskatchewan farmers 5.1-10	G. Blackmore Settler Computer Technologies Inc. Regina	ERDA(P) one year	5,900
Microcomputer Training for Saskatchewan Farmers • increase the level of computer literacy for Saskatchewan farmers 5.1-13	G. Blackmore Settler Computer Technologies Inc. Regina	ERDA(P) one year	9,500
Top Management Computer Model • training courses to improve computer management techniques for farmers	T. Thorson L. Anderson G. Harrison D. Sawatzky R. Wallace R.A. Schoney University of Saskatchewan	Saskatchewan Agriculture multiple years	4,980
Priority Management for Farm Families • develop a time management plan for farmers 5.2-17	B. Cook Priority Management Systems Saskatoon	ERDA(P) one year	7,870
Crisis Network for Farm Families • identify a feasible network of services that could more adequately respond to crises experienced by farm families 5.1-8	F. Driedger Family Services Bureau Regina	ERDA(F) two years	31,800
Determine Nature and Extent of Stress for Farm Families • determine the extent and nature of stress experienced by farmers in selected agricultural communities 5.2-8	E.M. Burwell Burwell Consulting Saskatoon	ERDA(P) one year	7,600
Better Rural Living • leadership development workshops dealing with rural change 5.2-15	B. Belt Saskatchewan Wheat Pool	ERDA(P) two years	5,000

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Women in Local Decision Making • assist farm women in networking and developing an awareness of opportunities and services 5.2-14	G. Joyce University of Saskatchewan	ERDA(P) one year	5,000
Farm Safety Workshops for Women • encourage women to take an active role in promoting safety on the farm 5.1-2	R. Rowley Saskatchewan Safety Council Regina	ERDA(F) three years	45,000
Farm Employment Needs Study • determine the extent of Saskatchewan farmers' needs for farm employees and identify the skills required 5.2-10	J. Hickie Saskatchewan Agriculture	ERDA(P) two years	14,250
Farming to Win • foster the development of private farm management services in the province 5.2-12	W. Holt Saskatchewan Agricultural Societies Association	ERDA(P) three years	502,750

ADF On-Farm Demonstration Project Listing

Title/Objective/Project Number	Cooperator/ Project Manager/Location Region	Funding Agency	Funding 1987-88
CROPS			
Early Maturing Spring Wheat Variety Trials • evaluate the growth and development of three new early maturing spring wheat varieties D-86-05-0209	W. Vanin District #18, Kamsack EC	ADF	$ 2,135
Demonstration and Evaluation of Intensive Cereal Management (ICM) Systems in Spring and Winter Wheat • demonstrate and evaluate advantages and disadvantages involved in cereal production using ICM principles D-86-05-0003	H. Lepage E. Tanner District #26, Indian Head SE	ADF	9,000
Winter Wheat Production • demonstrate the production of winter wheat under guidelines set out by the University of Saskatchewan D-86-05-0113	R. Bailey Bailey Brothers J. Ippolito District #40, Milden WC	ADF	306
Nitrogen Fertilization of Winter Wheat • demonstrate the difference of applying 34-0-0 or 46-0-0 in winter wheat production D-86-05-0032	G. Swanson A. Jones District #37, Semans SE	ADF	315
Winter Wheat Production in South East Saskatchewan • in cooperation with the Crop Development Centre, transfer the latest winter wheat production technology to area farmers D-86-05-0021	G. McLean District #41, Carnduff SE	ADF	3,140

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Barley-Winter Wheat Demonstration • evaluate the potential of winter wheat seeded with barley in the spring D-86-05-0079	E. Mickelson B. Swanson District #32, Hagen NE	ADF	1,300
Barley and Winter Wheat Seeding Demonstration • demonstrate the possibility of double planting an annual cereal with winter wheat under three different management systems D-86-05-0159	M. Froc S. Adam District #27, Melfort NE	ADF	64
Minimum vs Maximum Inputs in Barley Production • demonstrate the response of a regular feed barley variety and a semi-dwarf variety under varying inputs levels D-86-05-0075	L. Christopherson S. Adam District #28, Weldon NE	ADF	688
Barley Production Trials • demonstrate optimum malt characteristics through potash fertilization, seed treatment, phosphorus fertilization and seeding methods D-87-05-0241	K. Pollon Kandaco Barley Club L. Reeve District #20, Dafoe EC	ADF	4,100
Winter Rapeseed • evaluate the production of winter rapeseed in terms of winter survival, weed competition, growth habit, yield and seed quality D-86-05-0188	B. Swanson District #32, Prince Albert NE	ADF	441
Canola Varieties Demonstration • using all agronomic practices recommended for irrigated canola production, demonstrate on a field-scale basis a number of canola varieties from western and eastern Canada for use on irrigation farms by generating yield, cost and net returns D-86-03-0005	E. Bendig Saskatchewan Canola Growers Association S. Adam District #27, Melfort NE	ADF	3,750

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Canola Variety Demonstration • compare the performance of different canola varieties in black soils D-87-05-0230	S. Hrynkiw L. Fedorowich District #19, Canora EC	ADF	827
Sulfur Response in Canola • demonstrate the value of sulfur in fields where soil test results do or do not recommend sulfur application D-87-05-0274	D. Simmons District #39, Fort Qu'Appelle EC	ADF	239
Intercropping Peas and Canola • continue intercropping peas and canola and evaluate a rotary drum cleaner for separation of seed mixture D-86-05-0095	R. Petersen L. Gutek District #42, Rose Valley EC	ADF	450
Seed Bed Preparation - Canola • demonstrate different seeding methods of a small seed crop D-86-05-0142	D. Smart J. Pollock District #5, Moosomin SE	ADF	1,100
Canola - Peas • evaluate the return by intercropping field peas and Triazine-resistant canola D-86-05-0069	R. Torwalt C. Ruschkowski District #21, Leroy NE	ADF	1,583
Canola - Peas on Summerfallow • allow higher returns by growing peas and canola in the same field D-01-05-0286	J. Thompson C. Ruschkowski District #21, Leroy NE	ADF	780
Canola-Peas • demonstrate higher returns of both peas and canola when grown in the same field D-87-05-0289	D. Fetter C. Ruschkowski District #21, Watson NE	ADF	1,297
Field Pea Demonstration • demonstrate proper seed innoculation and the use of phosphate in field pea production D-87-05-0227	S. Hrynkiw L. Fedorowich District #19, Canora EC	ADF	1,012
Safflower Production in Southeast Saskatchewan • demonstrate the economic potential of safflower as an alternative crop D-87-05-0260	C. Story B. Hansen District #1, Estevan SE	ADF	920

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Wild Rice Test Seeding with Treaty Indians in Northern Saskatchewan • demonstrate the test planting of commercial wild rice by treaty Indians D-06-06-0201	W. Daniels Saskatchewan Indian Agriculture Program B. Swanson District #32, Prince Albert NE	ADF	3,750
Demonstration Orchard • evaluate the adaptation of various fruit tree varieties for production in the local area D-86-12-0125	S. and N. Zadorozny L. Lee District #31, Nipawin NE	ADF	35
Demonstration Orchard • evaluate the adaptation of various fruit tree varieties for production in the local area D-86-12-0143	D. and D. Scott L. Lee District #31, Garrick NE	ADF	178
Demonstration Orchard Project • demonstrate fruit varieties that will produce well in Saskatchewan areas D-86-12-0181	C. and M. Reimer E. Tanner District #26, McKague NE	ADF	506
Demonstration Orchard • demonstrate and evaluate old and new varieties of tree fruits in Saskatchewan D-87-12-0280	M. Marcinowski C. Ruschkowski District #21, Spalding NE	ADF	1,203
Demonstration Orchard • demonstrate fruit variety growth, in particular saskatoons and blueberries, in terms of habit, size, quantity, quality and storage ability D-87-12-0292	M. King V. Matschke Muller District #38, Turtleford NW	ADF	2,411
Rosalie and Eric Bear's "U Pick" Strawberry Farm • compare fruit varieties in terms of quality and marketing ability D-86-08-0215	E. and R. Bear E. Dessouki District #32, Saskatoon WC	ADF	870

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The Demonstration of an Alternate Overwintering Method and Suitable Cultivars for Commercial Strawberry production in Saskatchewan • demonstrate the use of plastic mulch and production of day-neutral strawberries D-86-05-0216	C. Stushnoff J. Turner University of Saskatchewan J. Holm District #22, Saskatoon WC	ADF	12,560
Timber Bay Blueberry Project • develop techniques of blueberry production and marketing possibilities D-87-05-0231	L. Beatty Timber Bay Producers Association G. Ivanochko District #44, Timber Bay NE	ADF	4,965
Management of Native Blueberry Stand • demonstrate the possibilities of commercial production of blueberries through management of existing stands D-87-05-0318	K. Brunner G. Ivanochko District #44, LaRonge NE	ADF	236
Garlic Production in Saskatchewan • demonstrate successful garlic production and estimate market and acceptance for Saskatchewan garlic D-86-08-0212	E. Vermette Saskatchewan Vegetable Growers Association J. Polegi District #12, Yorkton EC	ADF	2,308
Pedigreed Seed vs Elevator Cleaned Seed • demonstrate the economics of using pedigreed seed including reduced seeding rate, even emergence, even stand, uniform maturity and yield advantages D-86-05-0016	D. Pidwerbesky District #37, Strasbourg SE	ADF	60
Infrared Photography to Identify Irrigation Canal Seepage • using infrared photography, demonstrate the variability of crop growth between irrigation plots and within plots D-86-03-0154	J. Linsley Ponteix Water Users Association District #4, Ponteix SW	ADF	200

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Fertilizer for Forage Crops • using deep banding fertilizer techniques,demonstrate effects on forage production on the Big River Reserve D-86-05-0026	L. Stalwick Shellbrook Saskatchewan Indian Agriculture Program H. Amundson District #33, Shellbrook IR	ADF	160
Fertility Requirements of Lengthening Rotations • confirm varying results of nitrogen requirements on long rotations D-87-05-0273	L. Huber D. Simmons District #39, Lipton EC	ADF	551
Phosphorus Fertilizer Rates • compare two spring applied phosphorus fertilizer rates on summerfallow wheat D-86-10-0138	D. McKenzie B. Hansen District #1, Tribune SE	ADF	215
Nitrogen Response on Summerfallow • demonstrate the economic response that can be achieved from applying nitrogen D-87-10-0270	D. Simmons District #39, Fort Qu'Appelle EC	ADF	363
Evaluation of Fertilizer use with the Direct Seeding of Wheat • demonstrate the potential of direct seeding into standing wheat stubble with various fertilizer rates placed with the seed D-87-05-0261	G. Conrad B. Hansen District #1, Estevan SE	ADF	509
Evaluation of Knoll Fertility and Fertilizer Response • demonstrate the response of applying additional nitrogen to knolls in a 50-50 crop rotation D-87-05-0284	B. Hammerlindl B. Rapp District #17, Kindersley WC	ADF	878
Variable Rate Fertilization on Eroded Knolls • demonstrate the effect of variable rate fertilization on net return in a 50-50 crop rotation D-87-10-0256	J. Hay J. Holm District #22, Saskatoon WC	ADF	425

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Potassium Chloride Fertilizer Trial • demonstrate crop responses to potassium chloride fertilizer D-87-05-0259	E. Kaluzy K. Beaulieu District #23, Biggar WC	ADF	502
Growth Enhancement of Warm Season Vegetable Crops Using Plastic Mulch • demonstrate successful culture of warm season vegetables using plastic mulch and tunnels D-86-08-0223	D. Derdall Spring Creek Garden B. Hurd District #16, Outlook WC	ADF	910
SOILS			
Reduced Tillage - 2,4-D Spring Applied • demonstrate the use of spring applied 2,4-D to control winter annual weeds in the summerfallow D-87-10-0248	L. Gramiak J. Holm District #22, Saskatoon WC	ADF	1,050
Zero-Till Minimum Till Seeding Equipment Demonstration • promote reduced tillage and continuous cropping through a one-day demonstration D-87-05-0236	G. Carlson Crystal Lake Soil Conservation Co-op W. Vanin District #18, Stenan EC	ADF	3,537
Deep Ripping • test feasibility and benefits of deep ripping soil D-86-11-0171	W. Acaster H. Nickel District #34, Ruddell NW	ADF	450
Deep Ripping • test feasibility and benefits of deep ripping soil D-86-11-0170	D. Kieder H. Nickel District #34, North Battleford NW	ADF	438
Assessment of Yield Response to Deep Ripping • assess the value of deep ripping moderately solonetzic soils in the dark brown soil zone and produce information on crop response to deep ripping D-86-05-0195	L. Lisafeld B. Hansen District #1, Lampman SE	ADF	240

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Assessment of Yield Response to Deep Ripping • assess the response of deep ripping on solonetzic soils D-86-01-0218	H. Smith D. Pidworbesky District #37, Strasbourg SE	ADF	469
Deep Ripping • demonstrate the benefits of deep ripping on solonetzic soils to increase crop production D-87-05-0317	L. Lee District #31 Nipawin NE	ADF	3,907
Deep Plowing of Organic Soils • demonstrate the effect of deep plowing on the productivity of both shallow and deep organic/peat soil D-87-10-0319	D. Perrault District #25, Hudson Bay NE	ADF	3,423
Soil Degradation • demonstrate methods of improving soil organic matter or improving production on saline soils and make farmers consider the amount of soil degradation which is occurring D-86-05-0006	R. McLean M. Ruszkowski District #15, Davidson WC	ADF	7,098
Weed Control • demonstrate different herbicides and application methods to control or kill hard-to-control weeds such as Canada Thistle, Scentless Chamomile and Quackgrass D-86-05-0120	M. Ayars District #13, Melville EC	ADF	90
Infrared Crop Monitoring • demonstrate the feasibility of using infrared photography to monitor insects and diseases in crops D-86-05-0172	E. Truelove H. Nickel District #34, Richard NW	ADF	1,054

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Chemical Summerfallow • compare results of reduced "Rustler" application and added ammonium sulfate with recommended rates D-87-05-0240	W. Walker B. Rapp District #17, Kindersley WC	ADF	902
Land Reclamation with Roundup • effect permanent renovation to a field infested with quackgr=ss, demonstrate difference b \between chemical and mechanical eradication and compare cost effectiveness of both methods D-86-04-0164	J. Gopher D. Whitehead District #34, Cochin IR	ADF	175
Canada Thistle Control • demonstrate Canada Thistle control based on Agriculture Canada recommendations D-87-05-0242	B. Yonkman L. Reeve District #20, Punnichy EC	ADF	400
Sclerotinia Monitoring Project District • demonstrate the effectiveness of the petal monitoring method to predict sclerotinia infestation in canola D-87-05-0279	K. Schamber D. Cubbon District #36, Meadow Lake NW	ADF	2,039
Wynyard Maximum Economic Yield Club • determine methods of wheat farming that will produce maximum economic yield D-87-04-0243	B. Niedzwiedz W. Reeve District #20, Wynyard EC	ADF	560
Chemical Weed Control in Forage Seed Crops • demonstrate the effectiveness of various chemicals in controlling weeds in forage seed crops D-87-05-0315	L. Lee District #31, Nipawin NE	ADF	3,148
Soil Conservation Through Extended Cropping • demonstrate extended cropping programs of minimum tillage and no tillage D-86-10-0221	R. Howes District #8, Moose Jaw SW	ADF	268

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Extended Cropping • demonstrate response to varying fertilizer rates and economic feasibility of fertilizer use on stubble in an extended crop rotation and demonstrate advantages/disadvantages and constraints to extended cropping system D-86-05-0102	E. Maystrowich J. Polegi District #12, Yorkton EC	ADF	221
Economics of Continuous Cropping • compare net returns of continuous cropping with that of a 50-50 crop rotation D-86-05-0194	J. Knudson E. Tanner District #26, Archerwill NE	ADF	2,890
Economic Crop Production Techniques • demonstrate different cropping practices and inputs to improve farm profit potential D-87-05-0246	D. Johnston W. Reeve District #20, Wynyard EC	ADF	5,000
Production for Profit • demonstrate that economic yields can be obtained through proper fertilizer and herbicide use D-87-05-0336	T. Wakelin D. Jensen E. Johnson District #30, North Battleford NW	ADF	4,233
Efficient Crop Production Systems • establish on-farm demonstrations in the district that relates to improved crop and livestock production D-87-05-0266	L. Gutek District #42, Kelvington EC	ADF	3,108
Soil Salinity Management • maintain tall wheatgrass to increase productivity and economic returns on a saline area D-85-10-0343	B. Lawrence E. Moats District #7, Weyburn SE	ADF	1,311

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Utilization of Non-Productive Saline Soils by Growing Kochia • establish kochia on a saline area to control further spreads of salinity and mix forage with feed for dairy heifers D-86-05-0042	P. Martens J. Holm District #22, Aberdeen WC	ADF	60
Kochia on Saline Soils • establish kochia on saline soil to prevent further salinity spread D-87-01-0255	W. Martens J. Holm District #22, Saskatoon WC	ADF	60
Salinity • demonstrate cropping practices as a method of controlling the spread of salinity and/or reclaiming saline soils and demonstrate tile drainage as a method of reclaiming saline soils and/or stopping their spread D-86-10-0129	D. Wotherspoon M. Ayars District #13, Melville EC	ADF	819
Salinity Management • maintain tall wheatgrass to increase productivity and economic returns on a saline area D-86-12-0132	D. and H. Leonard F. Marean District #14, Regina SE	ADF	158
Salinity Management • maintain slender wheatgrass and alfalfa to increase the productivity of a severely saline area D-86-05-0135	B. Bruce F. Marean District #14, Lajord SE	ADF	477
Corn as an Annual Barrier for Snow Trapping • demonstrate the benefits of corn strips as an annual barrier for snow trapping in cereal/winter wheat rotation D-87-05-0238	M. Hamilton D. Pidwerbesky District #37, Strasbourg SE	ADF	86
Soil and Water Conservation • prevent deterioration in land quality from summerfallowing with tillage implements, try to control the spread of salinity by better water management and use legumes and other forages in the rotation to help protect the soil organic matters and produce a hay supply D-86-11-0166	D. Tumbach District #10, Swift Current SW	ADF	428

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Soil Conservation through Extended Cropping • demonstrate extended cropping programs of minimum tillage and no tillage D-86-01-0221	T. Mann L. Moats District #8, Moose Jaw SW	ADF	19,027
LIVESTOCK			
Reproductive Efficiency in the Beef Herd • increase the number of pregnant females in selected herds by five percent and reduce the calving period to 45 days D-86-01-0066	J. Pollock District #5, Moosomin SE	ADF	842
Clover Ploughdown, Black Lentil Ploughdown and Summerfallow • determine and compare the results of using sweet clover as green manure with black lentil ploughdown D-86-05-0208	S. Jones H. Nickel District #34, Richard NE	ADF	589
Green Manure Trial • determine if ploughed down sweet clover improves organic matter of soil D-86-11-0146	H. and J. Lake V. Matschke Muller District #38, Turtleford NW	ADF	102
Cereal Crops for Forage Production in the Southwest • determine and demonstrate how the feed supply for cattle in southwest Saskatchewan can be increased through the use of annual forage crops and determine if fall rye can be successfully underseeded D-86-05-0137	D. Barber Southwest Saskatchewan Forage Co-op Association P. Gerwing District #9, Swift Current SW	ADF	2,538

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Alfalfa Cubing Tour • demonstrate the potential of alfalfa over a range of soil types and to familiarize farmers with alfalfa advantages D-86-05-0092	R. Warner Beatty Alfalfa Processors S. Adam District #27, Beatty NE	ADF	1,100
Alfalfa Seed Fertilizer Trials • establish the optimum rate of sulfur and potassium fertilizer for alfalfa seed production D-87-05-0225	I. Olynyk L. Fedorowich District #19, Canora EC	ADF	1,654
Alfalfa Forage Production • demonstrate the production potential of alfalfa as a cash crop with high fertilization rates D-87-05-0265	O. Craig L. Lee District #31, Nipawin NE	ADF	257
Extended Cropping Using Sweet Clover in Rotation for Round Bale Silage • determine the feasibility of using sweet clover for round bale silage D-86-01-0039	J. MacIntyre B. Rapp District #17, Brock WC	ADF	2,334
Norgold Sweet Clover Demonstration • demonstrate the value of low-coumarin variety of sweet clover D-87-05-0229	S. Hrynkiw L. Fedorowich District #19, Canora EC	ADF	690
Maximizing and Preserving Quality of Hay • demonstrate a practical method of harvesting hay at higher moisture levels to minimize loss and maximize quality D-86-05-0156	R. Bilokreli J. Polegi District #19, Theodore EC	ADF	170
Chaff and Straw Ammoniation • demonstrate process of straw and chaff ammoniation and that it is a low cost nutritious feedstuff D-86-05-0118	L. Piggott B. Rapp District #17, Kindersley WC	ADF	9,142

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Ammoniation of Chaff and Cereal Straw • demonstrate the application of anhydrous ammonia to chaff and cereal straw to create an economical feedstuff for wintering beef cattle and demonstrate alternative feedstuffs in northeast Saskatchewan where traditional forage yields are drastically reduced by drought D-86-01-0189	J. Armstrong District #26, Tisdale NE	ADF	1,040
Straw and Chaff Ammoniation • demonstrate ammoniated straw and chaff production and the benefits of its low cost for overwintering D-87-01-0338	B. Fritz District #12, Yorkton EC	ADF	1,500
Straw and Chaff Ammoniation • demonstrate the techniques of chaff and straw ammoniation and to promote its potential feed value D-87-01-0340	B. Peterson District #9, Swift Current SW	ADF	2,500
Chaff and Straw Ammoniation • demonstrate the technique of chaff and straw ammoniation including uncovered stacks, and the potential value of ammoniated chaff or straw as a feedstuff to southwestern cattle producers D-86-01-0184	P. Gerwing District #9, Swift Current SW	ADF	31
Straw and Chaff Ammoniation • demonstrate that ammoniated chaff and straw provide nutritious low cost feed for over wintering D-87-01-0320	L. Pigott District #17, Kindersley WC	ADF	2,402

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Fairlight Forage Project • provide information on suitability of grasses, rotation patterns, chemical weed control, benefits of forage crop fertilization and carrying capacity of pasture for farmers in the region and other parts of Saskatchewan D-86-01-0058	J. Pollock Fairlight Forage Association District #5, Moosomin SE	ADF	5,331
Bright Sand Forage Project • test forage crops in terms of seeding methods, varieties, fertilizer and weed control D-87-05-0232	G. Gervais Bright Sand Forage Committee V. Matschke Muller District #38, Turtleford NW	ADF	3,171
Feed Value Related to Harvest Stage of Silage Corn • determine the effect on feed value of corn silage of up to 10 of the most recently recommended hybrids at three levels of maturity and to conduct corn evaluation trials as directed by the Saskatchewan Corn Committee D-86-03-0155	W. King Saskatchewan Corn Committee W. Hurd District #16, Outlook WC	ADF	3,000
Silage Variety Comparison • compare several new varieties of silage crops to standard silage crops D-87-01-0247	B. Doig District #43, Watrous EC	ADF	585
Forage Sorghum Production for Beef and Dairy Cattle • encourage the use of sorghum as a source of protein and fodder for livestock, analyze value of sorghum in the diet of young dairy and beef cattle D-86-05-0088	K. MacDonald Saskatchewan Cattle Feeders Association D. Gayton District #26, Indian Head SE	ADF	2,351
Sorghum vs Green Feed Trial • demonstrate the values of sorghum vs barley and oat green feed D-87-01-0251	B. Yonkman L. Reeve District #20, Punnichy EC	ADF	280

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Forage Feeding and Grazing • demonstrate and compare the most suitable crop combination for maximum tonnage and nutritional yield and visually observe the grazing capability of winter wheat and fall rye D-86-01-0104	T. Werle P. Peterson District #12, Langenburg EC	ADF	933
Rotational Grazing of Native Grass • demonstrate increased carrying capacity of reseeded pasture and the performance of these grasses on brown soil D-86-05-0086	D. Sinclair W. Kehler District #3, Limerick SW	ADF	950
Rotational Grazing of Native Grass • demonstrate the value of using rotational grazing over savory grazing and continuous grazing D-86-05-0176	H. Campbell J. Graham District #8, Mortlach SW	ADF	2,112
Savory Grazing Method Evaluation • evaluate the economic returns, stocking rate and forage improvement of pasture land using the savory grazing method D-86-05-0203	D. Lothammer B. Rapp District #17, Eatonia WC	ADF	892
Kinistino Grazing Co-Op • demonstrate establishment, seeding methods, of two different legumes in pasture prone to spring flooding D-87-05-0264	T. Jackson T. Boyle District #28, Kinistino NE	ADF	1,983
Intensive Rotational Grazing and Grass Establishment • establish recommended tame grasses as part of an intense rotational program D-86-05-0054	E. Carles E. Moats District #8, Radville SE	ADF	4,133

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Title/Objective/Project Number	Cooperator/ Project Manager/Location Region	Funding Agency	Funding 1987-88
Value of Mineral Supplements on Summer Pasture • demonstrate the value of feeding mineral supplements on summer pastures D-86-01-0121	M. Ayars Crescent Grazing Co-operative District #13, Melville EC	ADF	4,707
Injectable Copper Demonstration • demonstrate the effectiveness of biannual copper injections, into cattle, for conception rates, feed conversion and calving intervals D-87-01-0239	D. Simpson B. Doig District #43, Watrous EC	ADF	4,780
Fitch Farm Demonstration Project • determine the economic viability of fitch production D-87-01-0287	W. McKenzie G. Ivanochko District #44, LaRonge NE	ADF	1,552
Northeast Livestock Feed Services • provide 50 livestock producers of swine, beef and dairy with a feedstuffs analysis, rations and formulas for their particular livestock and assist in mix-mill calibration to reduce ration mixing error D-86-01-0204	J. Armstrong District #26, Tisdale NE	ADF	11,389
Feed Testing and Ration Formulation • increase awareness of the importance of feed testing and balanced rations and determine the desire or need for a custom feed sampling/nutrition service D-86-01-0186	B. Hansen District #1, Estevan SE	ADF	3,302
Feed Testing and Ration Formulation • encourage livestock producers to improve feeding management and productivity by feed testing and ration formulation D-86-01-0199	S. Hyrnkiw L. Fedorowich District #19, Canora EC	ADF	1,026
Custom Feed Sampling and Nutrition Consulting Pilot Project • increase use of feed analysis services and application of balanced rations by reducing input costs and increasing profitability D-87-01-0322	B. Hansen District #1, Estevan SE	ADF	13,365

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Custom Feed Sampling and Nutrition Consulting Project • increase use of feed analysis services and application of balanced ration by reducing input costs and increasing profitability through increased use D-87-01-0324	P. Gerwing District #19, Swift Current SW	ADF	13,303
4-H Feed Sample • demonstrate the productivity of safflower in the dark brown soil zone D-86-01-0197	J. Waddington D. Cubbon District #36, Meadow Lake NW	ADF	1,340
The Effect of Age at Castration on Growth Rates in Beef Calves • compare weight gains in spring and fall castrated calves D-87-01-0234	B. Blommaert J. Wilkinson M. Halyk J. Polegi District #12, Yorkton EC	ADF	872
Baldwinton Feedlot Project • provide extension activities involving backgrounding and finishing of calves and improve management skills needed to operate farm custom feedlots by generating accurate data performance D-86-01-0077	R. Brassard Northwest Feedlot Management Committee R. Sparling District #35, Lloydminster NW	ADF	10,896
Cage Culture of Rainbow Trout • examine production techniques to produce a 12 ounce trout in one season and reduce input costs to increase viability of trout production D-87-01-0258	K. Parada G. Ivanochko District #44, LaRonge NE	ADF	18,950
Brush Control • demonstrate recommended herbicide treatments for brush control and evaluate the cluster sprayer as a herbicide applicator D-86-05-0060	B. Peckover B. Hansen District #1, Lampman SE	ADF	92

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Brush Control • demonstrate recommended herbicide treatments for brush control and evaluate the cluster sprayer as a herbicide applicator D-86-05-0140	R. Hookenson B. Hansen District #1, Lampman SE	ADF	92
Human Resources			
A Guide to Better On-Farm Demonstrations • publish a guide on how to design, operate and use on-farm demonstrations D-86-06-0206	D. England J. Butz District #2, Regina SE	ADF	8,254
Farm Management Improvement • improve management practices to result in increased grain production D-86-06-0025	A. and E. Harper D. Cubbon District #36, Onion Lake NE	ADF	500
Production of Education Film on Legume Inoculation • explain step by step procedures for inoculation of legumes D-86-06-0224	D. Gayton Saskatchewan Agriculture, Regina SE	ADF	9,943
Extension Demonstration Awareness Tours and Advertising • encourage district farmers to visit on-farm development projects D-87-06-0249	B. Hurd District #16, Outlook WC	ADF	441
Yield Analysis of RM #259 • obtain reliable yield measurements from crop club projects to evaluate each project D-87-01-0268	G. Schweitzer B. Rapp District #17, Eston WC	ADF	1,514
Farm Air Seeder Tour • demonstrate eight different air seeder models and compare the results D-87-06-0307	M. Ayars District #13, Melville EC	ADF	371
Technology Transfer District #39 Bus Tour • D-87-06-0271	D. Simmons District #39, Fort Qu'Appelle EC	ADF	285

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Technology Transfer District #34 Bus Tour • D-86-06-0311	H. Nickel District #34, North Battleford NW	ADF	319
Technology Transfer District #17 Bus Tour • D-87-06-0313	B. Rapp District #17, Kindersley WC	ADF	597
Technology Transfer District #18 Bus Tour • D-87-06-0314	W. Vanin District #18, Kamsack EC	ADF	370
Technology Transfer District #19 Bus Tour • D-87-06-0328	L. Fedorowich District #19, Canora EC	ADF	300
Technology Transfer District #22 Bus Tour • D-87-06-0329	J. Holm District #22, Saskatoon WC	ADF	500
Technology Transfer District #26 Bus Tour • D-87-06-0330	E. Tanner District #26, Tisdale NE	ADF	249
Technology Transfer District #9 Bus Tour • D-87-06-0331	P. Gerwing District #9, Swift Current SW	ADF	102
Technology Transfer District #31 Bus Tour • D-87-06-0333	L. Lee District #31, Nipawin NE	ADF	339
Technology Transfer District #20 Bus Tour • D-87-06-0334	L. Reeve District #20, Wynyard EC	ADF	456
Fiscal Project Management • D-87-12-0299	H. Swanson District #34, Chartered Accountant NW	ADF	1,844

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Fiscal Project Management • D-87-12-0300	Mooney, Wooley and Company Certified General Accountants, Tisdale NE	ADF	1,929
Fiscal Project Management • D-87-12-0301	F. Milliker Chartered Accountant, Weyburn SE	ADF	463
Fiscal Project Management • D-87-12-0302	Stark and Company Chartered Accountants, Swift Current SW	ADF	962
Fiscal Project Management • D-87-12-0305	Kemp, Thompson, Ballantyne and McLeod Chartered Accountants, Prince Albert NE	ADF	550
Fiscal Project Management • D-87-12-0304	G. Graham Dean Chartered Accountant, Saskatoon WC	ADF	4,850
Fiscal Project Management • D-87-12-0306	Cottenie and Gardner General Accountants, Kamsack EC	ADF	1,505
Farmlab Evaluation Phase II • evaluate and assess the methodology, effectiveness and results of the Farmlab Demonstration Projects which were carried out by Saskatchewan Agriculture between April, 1981 and March, 1986 D-86-12-0205	T. Bryant Brystra Consultants, Regina SE	ADF	12,500

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